

Chapter 8—Conservation Action—Species

Species of Greatest Conservation Need

Fact Sheets

Birds

Mammals

Reptiles

Amphibians

Fish

Invertebrates

Habitat maps



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



Bobolink

Dolichonyx oryzivorus

STATUS: Populations in the eastern U.S. have declined since the early 1900s. North American Breeding Bird Survey data indicate a significant population decline in North America in recent decades. Status within the District of Columbia is undetermined.

RANGE: Breeds in the northern United States and southern Canada and winter in southern South America from Peru to Argentina. It is a passage migrant through the District of Columbia.

LOCAL HABITAT: Kenilworth Park, Anacostia Park, Rock Creek National Park, and Fort Circle Parks area.

SPECIES ECOLOGY: Bobolinks use tall grass fields, pastures, and grain fields for breeding. In some areas, they favor hayfields in close association with dairy farms. In spring and summer, their diets consists largely of insects, especially caterpillars, grasshoppers, and beetles, but in fall it also includes large quantities of weed seeds, wild rice, and bristlegrass.

Nests are usually placed in a scrape, either natural or created by the female. Clutch size varies from 4 to 7 eggs.

THREATS: Primary threats are due to loss of suitable habitat. Changing agricultural practices and the loss of farmland to development are key factors contributing to species decline.

CONSERVATION ACTION: Need to identify and conserve grasslands. Studies to determine precise status and habitat use within the District.

SITE MAP: 4

REFERENCES: 1 – 4



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



Acadian Flycatcher *Empidonax virescens*

STATUS: BBS data from 1966 through 1989 show stable populations in the Eastern region and in neighboring Maryland.

RANGE: Breeds from southern Minnesota east through southern New England, south to Gulf Coast and central Florida. Winters in Caribbean slope of Nicaragua, both slopes of Costa Rica and Panama, and in northern and western Colombia, northern Venezuela, and western Ecuador. Passage migrant through the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Anacostia Park, Oxon Run Parkway, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: Most often found in deciduous forests near streams, in bottomland hardwoods, and cypress swamps. Key habitat requirements are tall closed canopies and relatively open understories. Primarily breeds in moist, upland deciduous forests with a moderate understory, generally near a stream. Tends to be scarce or absent in small forest tracts, unless the tract is near a larger forested area.

THREATS: The major threat is loss of suitable habitat as natural forests become fragmented, favorable conditions become less common, and cowbird parasitism increases. Largely absent from most heavily suburbanized and urbanized areas, and present in low densities in agricultural zones.

CONSERVATION ACTION: Forest management practices that produce large mature forests with tall closed canopies and high tree density will be favorable for Acadian Flycatchers. Apparently, will tolerate light selection cutting, although any cutting that opens up the canopy would be detrimental. Preservation of the Acadian Flycatcher in the District requires the protection of extensive moist and riparian woodlands with brushy understories. Enhanced monitoring is required within the District.

SITE MAPS: 1, 2, 5

REFERENCES: 1 - 4



District of Columbia

Bird Fact Sheet



American Bittern *Botaurus lentiginosus*

STATUS: Widespread distribution but populations are declining. Critically imperiled in the District of Columbia.

RANGE: Breeds from southeastern Alaska, Manitoba, and Newfoundland south to California, New Mexico, Arkansas, and Carolinas. Winters north to coastal British Columbia, Illinois, and along Atlantic coast to southern New England. Local migrant (resident?) within the District of Columbia.

LOCAL HABITAT: Kenilworth Park, Anacostia Park, Oxon Run Parkway, and Oxon Cove Park.

SPECIES ECOLOGY: Breeds and overwinters in freshwater wetlands with emergent vegetation and shallow water. Seems adaptable to a wide range of wetland habitats ranging from margins of boreal lakes, through riverine marshes, to dense cattail marshes, and can thrive in wetlands of many types as long as suitable prey and adequate cover are available. Diet consists of strictly animal prey, mainly frogs, fish, crayfish, and small mammals.

American Bitterns construct a platform nest from mainly dead reeds, sticks, cattails, and tall grasses either on dry ground or above water in tall vegetation. Clutch size averages 4 to 5 eggs.

THREATS: Threatened by loss and degradation of wetlands due to drainage, filling, conversion to agriculture or recreational use, siltation, and pollution.

CONSERVATION ACTION: Readily uses artificial wetlands created by impoundments at waterfowl refuges, a trait that could facilitate restoration of populations in regions where natural, inland freshwater wetlands have been destroyed or were scarce originally. Small wetlands (less than five ha) may serve as important alternate feeding sites and as "stepping stones" during movements between larger wetlands. Further studies are needed to determine population trends for this secretive species within the District.

SITE MAPS: 3, 7

REFERENCES: 1 - 4



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



American Black Duck *Anas rubripes*

STATUS: An abundant species that has been declining steadily. Eastern region data show stable populations from 1966 through 1989. Status within the District of Columbia is undetermined.

RANGE: Breeds in eastern and central North America, from Manitoba and Labrador to Texas and Florida. Winters from southern Minnesota and Nova Scotia south to southern Texas and central Florida. Local migrant (resident?) within the District of Columbia.

LOCAL HABITAT: Kenilworth Park, Anacostia Park, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: Inhabits shallow margins of lakes, streams, bays mud flats, and open waters. Utilizes a wide variety of wetland habitats in both freshwater and marine situations, in and around marshes, swamps, ponds, lakes, bays, estuaries, and tidal flats. Eats mainly plant material (mainly seeds of various aquatic plants)

and small aquatic animals (insects, amphibians, etc.) in freshwater habitats, and mostly mollusks and crustaceans in maritime habitat. Nests in tidal marshes, estuaries, as well as totally freshwater habitats. Clutch size varies from 9 to 12 eggs.

THREATS: Recent declines in past decades have been linked to habitat loss and an increase in Mallard numbers. Hybridization between the American Black Ducks and Mallards is a major concern. This species is particularly sensitive to human disturbance when nesting.

CONSERVATION ACTION: Maintaining large (30-50 ha) marshes containing dense emergent vegetation near a complex of diverse wetland types is the preferred management practice for this species. Further species-focused research is needed in the District.

SITE MAPS: 1, 3, 5, 7, 11

REFERENCES: 1 - 4



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



STATUS: Non-significant annual declines have been recorded for this species. State and regional results show sharp, but non-statistically significant declines for the period 1980-1999. Status within the District of Columbia is undetermined.

RANGE: Breeds primarily in the northeastern Midwest and adjacent Canada and the Northeast. Winters in the southeastern US, with some birds remaining on the lower Eastern shore during mild winters. Resident, local migrant, and breeder within the District of Columbia

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Anacostia Park, Oxon Run Parkway, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: The non-breeding habitat of this species is similar to its breeding habitat but typically includes more man-made habitats (e.g. sewage farms, rice fields), upper reaches of estuaries, and occasionally coastal meadows and is not limited to early-successional habitats. Unlike on the breeding grounds, mature pine-hardwood

American Woodcock *Scolopax minor*

and bottomland hardwoods are often preferred. Wintering birds generally occupy moist thickets in daytime, and sometimes shift to more open habitats such as pastures, fields (including agricultural), and young clearcuts at night.

THREATS: The most serious threat is habitat loss and alteration, through urbanization, reforestation, drainage of wetlands, and agricultural development. The primary cause has been urbanization, which has severe impacts along the east coast. Environmental pollutants such as acid deposition, and pesticides pose additional threats. Long-term declines in populations of this species are apparent from a range of individual monitoring efforts.

CONSERVATION ACTION:

Woodcocks use a wider variety of habitats during the non-breeding season. Wintering individuals may benefit most from a wide variety of habitats and age classes. This diversity of habitat types may be especially important to survival when severe weather forces woodcock from preferred sites.

SITE MAPS: 2, 5, 6

REFERENCES: 1- 4



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



Black-crowned Night-heron *Nycticorax nycticorax*

STATUS: Stable or increasing in most areas of North America, but has declined in some areas. Vulnerable within the District of Columbia.

RANGE: Breeds throughout the US (except Rocky Mountain region), from Washington, Saskatchewan, Minnesota, and New Brunswick to southern South America. Winters in the southern half of the United States. Local migrant (resident?) and breeder within the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Anacostia Park, Oxon Cove Park, and the National Zoo.

SPECIES ECOLOGY: Inhabits marshes, swamps, wooded streams, mangroves, shores of lakes, ponds, lagoons; salt water,

brackish, and freshwater situations. Roosts by day in mangroves or swampy woodland. Diet consists mainly of fish, and lesser quantities of aquatic invertebrates, reptiles, amphibians, and small mammals. Eggs are laid in a platform nest in groves of trees near coastal marshes or on marine islands, swamps, marsh vegetation, clumps of grass on dry ground, orchards, and in many other situations. Clutch size varies from 3 to 5 eggs.

THREATS: Main threats are disturbance, degradation, and/or destruction of nesting and foraging sites. Breeding individuals are particularly sensitive to disturbance just before and during egg laying.

CONSERVATION ACTION: Known colony sites and foraging areas should be protected from disturbance and habitat destruction. Potential colony sites can be created on dredge spoil islands.

SITE MAPS: 1, 3, 5, 7, 13

REFERENCES: 1 - 4



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



STATUS: May be decreasing in the northeastern United States. Critically imperiled in the District of Columbia.

RANGE: Breeds from Alberta east to Manitoba and Nova Scotia, south to the Gulf Coast and Florida. Winters from southern Florida southward into tropics. Passage migrant and breeder in the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: Breeds in broadleaf and mixed forest, preferring denser situations, less frequently in open woodland. Generally perches under or in tree canopy, forages at openings, edges, and wet areas. Opportunistically consumes various small vertebrates (small mammals, birds, snakes, frogs, etc.) and large

Broad-winged Hawk *Buteo platypterus*

invertebrates. Typically hunts from perch on stub or dead limb of tree, typically at clearing, along woodland road, forest edge, or at margin of seasonal and permanent waters. Regularly nests near wet areas and forest openings, edges, and woodland roads. Typically nests in crotch of moderate- to large-sized tree or on branch next to trunk, about 7-12 m above ground. Clutch size varies from 2 to 3 eggs.

THREATS: Habitat loss and fragmentation.

CONSERVATION ACTION: Understanding this species' sensitivity to forest fragmentation and various silvicultural practices will be important in maintaining healthy populations of Broad-winged Hawks. Because the Broad-winged Hawk is not sensitive about the type of forest habitat used for nesting, any efforts to conserve forest lands, particularly large contiguous tracts, will help conserve populations of this raptor in the District.

SITE MAP: 2

REFERENCES: 1 - 5



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



STATUS: Widespread, reasonably common, and demonstrably secure in many areas of North America. Status in the District of Columbia is undetermined.

RANGE: Breeds from Alaska east through Ontario to Newfoundland, and southward throughout western mountains, Great Lakes region, North Carolina, and New England. Winters in breeding range and south to Gulf Coast and Florida. Resident, local migrant, and breeder within the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Anacostia Park, Oxon Run Parkway, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: The preferred habitat of this species includes forest, woodlands, forested floodplains and swamps. Scrub and parks are also used in winter and during migration. Most often found in coniferous and mixed forests. In the eastern U.S. south of the northern conifer zone, populations occur regularly in forested floodplains, and sometimes swamps. A component of dead

Brown Creeper *Certhia Americana*

trees is essential for nesting, so brown creepers tend to be associated with older forests. Brown Creepers feed on arthropods gleaned off the surface and in the crevices of tree bark. They feed primarily on the main trunk of trees, moving from bottom to top. They also consume some nuts and seeds. This species' critical habitat requirement for nesting is dead trees with loosely attached bark, under which it can conceal its nest. Clutch size varies from 4 to 7 eggs.

THREATS: Locally threatened by loss of forested wetlands and floodplain forest, forest fragmentation, and forest management practices that eliminate the dead tree component. Species is apparently area-sensitive, requiring large blocks of habitat.

CONSERVATION ACTION: Forests with a mix of tree species should be maintained where Brown Creeper populations reside. There is a need to protect or manage stands to have at least some trees or groves of trees over 100 years old, and to have dead trees with flaking bark for nest sites. Few bird species are as dependent on dead trees as Brown Creepers. Large dead trees in forested habitat should be allowed to stand at least until most of the bark is gone. More studies on population dynamics are needed for this species in the District.

SITE MAPS: 2

REFERENCES: 1 - 5



District of Columbia

Bird Fact Sheet

Brown Thrasher *Toxostoma rufum*



STATUS: Maryland BBS data from 1966 through 1989 show a highly significant average annual decline. Vulnerable in the District of Columbia.

RANGE: Breeds from southeastern Alberta, Manitoba, Ontario, and northern New England south to Gulf Coast and Florida. Winters in southern part of breeding range. Resident, local migrant, and breeder in the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Anacostia Park, Capitol Hill Parks, Oxon Run Parkway, Oxon Cove Park, and Fort Circle Parks area.

SPECIES ECOLOGY: Inhabits thickets and bushy areas in deciduous forest clearings and forest edge, shrubby areas and gardens; in migration and winter also in scrub. Feeds on insects and other invertebrates and small fruits, as well as

some small amphibians and reptiles; forages on or near ground. Nests on ground under small bush or as high as about 4 m in tree, shrub, vine.

THREATS: Habitat loss, through the removal of hedgerows, may contribute to the decline. An additional potential threat may be decline in insects during the spring and summer months. Since Brown Thrashers feed primarily in suburban and agricultural habitats, such behavior may make them more vulnerable to the use of pesticides.

CONSERVATION ACTION: Habitat management efforts aimed at preserving open fields, hedgerows, and brushy areas, as well as regulations on the use of pesticides in urban areas would go a long way in maintaining healthy populations of this ubiquitous species. Continued monitoring of the population is needed within the District.

SITE MAPS: 2, 6, 8

REFERENCES: 1 - 4

...



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



Cerulean Warbler *Dendroica cerulean*

STATUS: Populations have shown significant declines across the range in the eastern United States, although the range has expanded, particularly in the northeast, perhaps in response to large-scale forest maturation. Status undetermined within the District of Columbia.

RANGE: Breeds from southeastern Minnesota, southern Ontario, and western New England south to Texas, Louisiana, and northern Gulf Coast states. Winters primarily on the eastern slopes of the northern Andes. Passage migrant and breeder within the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Oxon Run Parkway, Glover- Archbold Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: Inhabits mature deciduous forests on both the breeding grounds in North America. Breeding areas in the Northeast are often in floodplains or other mesic conditions and are typified by large, mature trees and closed or semi-open forest canopies. Feeds primarily on bees, wasps, beetles, and caterpillars. The compact nest is built by the female on the

lateral limbs of a tree and placed at a considerable distance from the bole of the tree, usually saddled on a large, lateral branch, attached perhaps to a small protruding twig. Clutch size ranges from 3 to 5 eggs.

THREATS: Habitat loss and fragmentation are the primary threats. Breeding populations in small forest tracts throughout the range are declining rapidly to extirpation. Patches of habitat below a certain size are simply not capable of supporting breeding birds.

CONSERVATION ACTION: Given the Cerulean Warbler's dependency on large tracts of appropriate forested habitat, preservation of such patches is critical. Forest management activities that are sensitive to the fragmentation of existing tracts would go a long way in the conservation of this species. Baseline studies on the population ecology of this species is needed within the District.

SITE MAPS: 2, 5

REFERENCES: 1 - 4



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



Chimney Swift *Chaetura pelagica*

STATUS: Significant downward trend in the United States and Canada from 1966-1996 as indicated by analysis of BBS routes. Secure within the District of Columbia.

RANGE: Breeds from southeastern Saskatchewan east to southern Quebec and Nova Scotia, and south to Gulf states. Winters in the South America. Passage migrant and breeder in the District of Columbia.

LOCAL HABITAT: Present in all major parks and urban centers of the District.

SPECIES ECOLOGY: Cosmopolitan; inhabits rural and urban environments having both an abundance of flying arthropods and suitable roosting/nesting sites. Nests principally in chimneys, but also on the interior walls of a variety of other anthropogenic structures including silos, barns, outhouses, uninhabited houses, boathouses, wells, and cisterns. Natural nest sites include the interior of hollow tree trunks and branches, Pileated Woodpecker cavities and rock shelters. Nest is a half-saucer shaped structure comprising straight twigs glued together with a saliva-like secretion and fastened to a vertical wall, usually in a dark, protected area of a building. Clutch size ranges from 3 to 5 eggs.

THREATS: The construction of homes without fireplaces and the screening, and demolition of buildings historically used for nesting/roosting can

eliminate important habitat. The surface of metal flue pipe emplaced within newly-constructed chimneys is too smooth for swifts to cling to, resulting in the entrapment and death of birds. Potential for impact on prey availability through the use insecticides and pesticides.

CONSERVATION ACTION: Management practices for Chimney Swifts include retaining chimneys as habitat and the construction of artificial nesting/roosting structures. Dark, vertical shafts having rough interior surfaces that facilitate roosting (e.g., chimneys, hollow trees) are essential for nesting and roosting. Chimneys with smooth surfaces (e.g., metal flue pipe) should be capped to prevent swift entrapment. Chimneys should be kept free of creosote as creosote build-up increases the likelihood of nest detachment from the chimney wall. This species readily adapts to anthropogenic structures for nesting and roosting; therefore likely to establish in new or historic localities with the construction of buildings that provide sunlight-excluding, vertical, rough-surfaced shafts. Determining trends in the use of chimney screening and the construction of new homes having chimneys with rough interior surfaces would be useful in assessing breeding habitat availability.

SITE MAPS: 2, 5, 8

REFERENCES: 1 - 4



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



Wilson's Snipe *Gallinago delicata*

STATUS Breeding Bird Survey (BBS) data from 1966 to 1992 show a non-significant increase throughout the United States. Status within the District of Columbia is undetermined.

RANGE Breeds from Northern Alaska and Canada south to California, southwestern states, and New Jersey. Winters across much of the United States north to British Columbia and Virginia. Passage migrant through the District of Columbia.

LOCAL HABITAT Kenilworth Park, Anacostia Park, and Oxon Cove Park.

SPECIES ECOLOGY Inhabits wet, grassy, or marshy areas, from tundra to temperate lowlands and hilly regions. In winter and during migration, also found in wet meadows, flooded fields, bogs, swamps, moorlands, and marshy banks of rivers and lakes. Feeds on insects, particularly fly and beetle larvae, are the Common Snipe's most important food

items, but it also eats earthworms, small crustaceans, snails and small quantities of plant material. The nest consists of a depression in the ground under concealing vegetation. Clutch size averages 4 eggs.

THREATS Loss, degradation, and modification of emergent wetlands through development, alteration of hydrology, and invasive species infestation. Snipe avoid marshes with tall, dense vegetation, such as that found in cattail and *Phragmites* monocultures.

CONSERVATION ACTION Restore and protect emergent wetlands with a focus on the control of cattails and the eradication of *Phragmites*.

SITE MAPS: 3, 4, 7, 9

REFERENCES: 1 - 2



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



Eastern Meadowlark *Sturnella magna*

STATUS: Populations of this species currently express some of the most consistent declines of any grassland bird in the United States. Breeding Bird Survey (BBS) data indicate a significant decline (averaging 2.53% per year) in North America, as well as the Eastern Region. Critically imperiled within the District of Columbia.

RANGE: Breeds from southeastern Canada south throughout eastern United States, west to Nebraska, Texas, and Arizona. Winters in most of breeding range. Resident, local migrant, and breeder in the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Anacostia Park, and Oxon Cove Park.

SPECIES ECOLOGY: Inhabits grasslands, savanna, open fields, pastures, cultivated lands, sometimes marshes. Tends to avoid recently burned grassland habitats. Eats mainly insects and other small invertebrates, also grain and seeds; forages on the ground. Nests on the ground

in concealing herbage. The nest is a partly or completely domed cup nest composed of grasses, and, occasionally, of weed stems. Clutch sizes vary from 1-6 eggs.

THREATS: Primary threat is loss of appropriate habitat as farms and fields give way to development, revert to forests, or shift from pastures to row crops. Intensive management of hayfields and earlier and more frequent mowing affect nesting success. Also, the continued use of chemical fertilizers and pesticides disrupts habitat and food supply.

CONSERVATION ACTION: The future of the species depends on the continued presence of field, pasture, and meadow habitat, which are declining as habitat is lost and agricultural practices change. The species needs a minimum grassland size of 15-20 acres, with adjusted mowing schedules, and the implementation of more biological and integrated pest management.

SITE MAP: 4

REFERENCES: 1 - 4



District of Columbia

Bird Fact Sheet

Eastern Towhee *Pipilo erythrophthalmus*



STATUS: Significant population declines have occurred in the last 30 years, particularly in the northeastern portion of the range. Apparently secure in the District of Columbia.

RANGE: Breeds from British Columbia east to Maine, and south to California, southwest, Louisiana, Florida, and Guatemala. Winters south from southern British Columbia, Nebraska, and southern New England. Resident breeder in the District of Columbia

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Anacostia Park, Oxon Run Parkway, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: Inhabits forest and swamp edges, regenerating clearcuts, open-canopied forests (particularly those with a well-developed understory), reclaimed strip mines, mid-late successional fields, riparian thickets, overgrown fencerows, shrub/small-tree thickets, and other brushy habitats. Typically forages on the ground in dense, low vegetative cover. Scratches among loose ground debris (e.g., leaf litter) to

uncover seeds and invertebrates. Omnivorous; consumes a wide variety of seeds, fruits, invertebrates, and small vertebrates. Nest is typically constructed on the ground, concealed among dense, woody vegetation. Clutch size varies from 2 to 5 eggs.

THREATS: Population densities are lower in urbanized areas relative to forested areas due to reduction in suitable successional habitat. Maturation of successional habitats also results in lower population densities.

CONSERVATION ACTION: Since the species prefers open-canopied, shrubby areas, management practices should promote early- to mid-seral successional habitats. Monitoring should continue until populations stabilize or appropriate management practices are developed and implemented.

SITE MAPS: 2, 6

REFERENCES: 1 – 4



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



Field Sparrow *Spizella pusilla*

STATUS: North American Breeding Bird Survey (BBS) data indicate annual survey-wide decrease in the period 1966-1996, and a highly significant average annual decline of 3.6% in the Eastern region. Imperiled in the District of Columbia.

RANGE: Breeds from North Dakota east to central New England, and south to Georgia, Mississippi, Louisiana, central Texas, and western Colorado. Winters south to Gulf of Mexico and northeastern Mexico. Resident (breeder?) and local migrant within the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Anacostia Park, Capitol Hill Parks, Oxon Run Parkway, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: Inhabits old fields, brushy hillsides, overgrown pastures, thorn scrub, deciduous forest edge, sparse second growth, fencerows. Optimal habitat was described as areas greater than 2 hectares containing dense, moderately tall grass, low to moderate shrub density with 50-75% of shrubs less

than 1.5 meters tall, and shrub cover between 15-35 percent. Eats insects, also spiders and seeds; forages mainly on the ground. Early nests are on or near ground in weed clumps or grass tufts, while later nests may be higher in small thick shrubs. The nest is a cup-shaped structure, constructed of dry grasses, weeds, rootlets, and hairs. Clutch size ranges from 1 to 5 eggs.

THREATS: Current intensive agricultural practices and spreading urbanization continue to restrict, or eliminate nesting habitat of old weedy fields with shrubs or small trees.

CONSERVATION ACTION: Keys to management include providing shrub-dominated edge habitat adjacent to grassland or providing grassland with a shrub component (both of must which include dense grass and moderately high litter cover), and avoiding disturbances that completely eliminate woody vegetation.

SITE MAPS: 4, 6

REFERENCES: 1 – 4



District of Columbia

Bird Fact Sheet

Grasshopper Sparrow *Ammodramus savannarum*



STATUS: BBS data from 1966 through 1989 indicate a highly significant average annual population decline in the Eastern Region. Status is undetermined within the District of Columbia.

RANGE: Breeds from British Columbia, Manitoba, and New Hampshire south to Florida, West Indies, and Mexico. Winters north to California, Texas, and North Carolina, and south through Central America to north Costa Rica, and in the Bahamas and Cuba. Passage migrant (breeder?) through the District of Columbia.

LOCAL HABITAT: Kenilworth Park and Oxon Cove Park.

SPECIES ECOLOGY: Breeding Grasshopper Sparrows prefer grasslands of intermediate height that are often associated with clumped vegetation interspersed with patches of bare ground. Other habitat requirements include moderately deep litter and sparse coverage of woody vegetation. Feed on insects (especially grasshoppers), other small

invertebrates, grain (especially of bristlegrass and panic grass), and seeds. Picks up food items from the ground surface. The nest is a shallow cup-shaped structure made of dried grasses lined with finer grasses, rootlets, or hair. Clutch size varies from 3 to 5 eggs.

THREATS: Populations declines have resulted in part from loss of habitat, especially the conversion of grassland to row-crop agriculture, urban sprawl, and reforestation, compounded by losses incurred as a result of mowing of habitat and subsequent increased predation.

CONSERVATION ACTION: The key to continued Grasshopper presence is management of grasslands to maintain woody vegetation at less than 3 ft. Suitable oldfields and grasslands should not be cut until after the peak of the breeding season.

SITE MAP: 4

REFERENCES: 1 – 4



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



Great Horned Owl *Bubo virginianus*

STATUS: Breeding Bird Survey data (1966-1989) show a stable population in the eastern region. Imperiled in the District of Columbia.

RANGE: Resident from Alaska and northern Canada eastward and southward throughout the Americas. Resident and breeder within the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: Inhabits various forested habitats, moist or arid, deciduous or evergreen lowland forest to open temperate woodland, including second-growth forest, swamps, orchards, riverine forest, brushy hillsides, and desert. Opportunistic feeder; eats mainly

mammals (commonly mouse to rabbit size) and small to large birds (including hawks and waterfowl). Nest sites in different areas include abandoned or usurped nests of other birds (e.g., hawk, crow) or squirrel, natural tree cavities, stumps, rocky ledges, caves, in barns, and on artificial platforms. Clutch size ranges from 1 to 2 eggs.

THREATS: Progressive habitat loss as woodlands are converted to agriculture and development.

CONSERVATION ACTION: Preservation of extensive woodlands and public education is important for the management of this species in the District. Further studies are needed.

SITE MAPS: 2, 5

REFERENCES: 1 – 4



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



Hooded Warbler *Wilsonia citrine*

STATUS: BBS data from 1966 through 1989 show a highly significant average annual increase of 3.2% in the Eastern region and a stable population in neighboring Maryland. However, notable declines in disturbed and successional habitats in general have been observed. Status within the District of Columbia is yet to be determined.

RANGE: Breeds from Iowa, Michigan, and southern New England south to Gulf Coast and northern Florida. Winters in Mexico, Belize, Guatemala, and Honduras; rarely in northern South America and the West Indies. Passage migrant (breeder?) within the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: The Hooded Warbler nests in understory of deciduous forest, especially along streams and ravine edges, and thickets in riverine forests. It inhabits both young and mature forests but is most abundant in the latter. A dense shrub layer (mainly sweetbay, winterberry, southern arrowwood, sweet pepperbrush, American holly, and azalea) and scant ground cover are important.

Generally favors large tracts of uninterrupted forest, but sometimes nests in forest patches as small as 5 ha, probably where these are close to larger forested areas. Eats a wide variety of insects and spiders; gleans and flycatches in undergrowth, and rarely moves more than 4.5 m above ground when foraging. The nest is a compact cup of grasses on a base of dead leaves in a small shrub or tangle. Clutch size varies from 3 to 4 eggs.

THREATS: Locally threatened by habitat loss and degradation.

CONSERVATION ACTION: Preservation of large tracts of contiguous forest or riparian bottomland forests with mature forest buffers is of primary importance. Forest management practices noted as beneficial or tolerable include localized disturbances that result in an increased shrub layer density. Dense foliage between 0.3 and 1 m is an important component, and a successful predictor, of occupied sites. Data deficient within the District, and hence needs more research.

SITE MAPS: 2, 5

REFERENCES: 1 – 4



District of Columbia

Bird Fact Sheet

Kentucky Warbler *Oporornis formosus*



STATUS: Breeding Bird Survey data from 1966 through 1989 show a stable population for the eastern region and Maryland. Status is undetermined in the District of Columbia.

RANGE: Breeds from Iowa and Indiana east to New Jersey, and south to southeastern United States. Winters from Mexico through Costa Rica and Panama, and into northern Colombia and northwestern Venezuela. Passage migrant (breeder?) within the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Oxon Run Parkway, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: Breeds in humid deciduous forest, dense second growth, swamps. Occurs in stands of various ages but is most common in medium-aged forests. Prefers forests with a slightly open canopy, dense understory, and well-developed ground cover. A long-term study in Virginia found that forest type, streams, and the density of deer were significant variables in territory selection. Feeds mainly on invertebrates. Walks rapidly over ground overturning leaves with bill, searches under sticks and in crevices, leaps up to snatch insect or spider from

overhanging leaf or branch. Nest is a cup-shaped structure constructed of grass, weed stems, rootlets, and occasional threads and animal hair. Clutch size ranges from 3 to 6 eggs.

THREATS: The species is particularly vulnerable to the effects of forest fragmentation. Grazing damage to forest understory by White-tailed Deer has been suggested as a major threat.

CONSERVATION ACTION: Land management plans designed to promote the survival of this species must include the preservation and maintenance of large blocks of mature, moist deciduous forest. Being a ground-nester, it requires well-developed ground cover with a thick understory being key. Because of this crucial requirement, preserve managers should promote dense low vegetation by managing deer populations.

SITE MAPS: 2, 5

REFERENCES: 1 – 4



District of Columbia

Bird Fact Sheet

Least Bittern *Ixobrychus exilis*



Photo by Rob Bennetts

Species of Greatest Conservation Need

STATUS: Has probably declined over the past century, primarily due to habitat loss; however, still widespread over very large range and common in many areas. Many states in the Northeast list the species as ranging from special concern to threatened. Breeding Bird Survey data from 1966 through 1989 show stable populations in the eastern region. Critically imperiled in the District of Columbia.

RANGE: Breeds locally in Oregon, California, and southwest, and from Manitoba and Texas east to Atlantic coast. Winters from southern California, lower Colorado River, and Gulf Coast southward, as well as Central America. Passage migrant through the District of Columbia. Recorded as a breeder in the District by the 1983-1987 Breeding Bird Atlas project, though recent efforts have not yielded a confirmed record.

LOCAL HABITAT: Kenilworth Park and Oxon Cove Park (?).

SPECIES ECOLOGY: Breeds in tall emergent vegetation in marshes, primarily freshwater, less commonly in coastal brackish marshes and mangrove swamps. Prefers marshes with scattered bushes or other woody growth. Eats small fishes, amphibians, leeches, slugs, snails, crustaceans, insects, and occasionally small mammals. Heavy growths of cattail, bulrush, wild rice, burreed, water smartweed, and reeds are favored feeding sites.

Nests are platforms of dead vegetation interwoven among live plants. They are constructed on or near the ground, typically over water. Clutch size ranges from 1 to 5 eggs.

THREATS: The alteration, degradation, and destruction of wetlands pose the most significant threat.

CONSERVATION ACTION: Preservation, protection, and improvement of wetland habitats, particularly large (greater than five ha), shallow wetlands with dense growths of robust, emergent vegetation, is the most urgent management need. Equal ratios of cover to open water are preferred. The Least Bittern readily uses wetlands created by artificial impoundments and seems adaptable to a wide range of wetland habitats. These traits could facilitate restoration or expansion of populations in regions where marshland losses have been high, such as along the Anacostia tidal basin within the District. Further studies are needed in the District.

SITE MAPS: 3, 7

REFERENCES: 1 – 4



District of Columbia

Bird Fact Sheet

Louisiana Waterthrush *Seiurus motacilla*



STATUS: Breeding Bird Survey (BBS) data from 1966 through 1989 show stable populations in both Maryland and throughout its range in the southeastern United States, though local declines have been reported due to habitat loss and degradation. Imperiled within the District of Columbia.

RANGE: Breeds from Minnesota, southern Ontario and central New England south to Texas and Georgia. Winters south through Mexico and Central America into northern and western Colombia and northwestern Venezuela. . Recorded as a breeder in the District by the 1983-1987 Breeding Bird Atlas project, though recent efforts have not yielded a confirmed record.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park (?), Oxon Run Parkway, Oxon Cove Park (?), and the Fort Circle Parks area.

SPECIES ECOLOGY: Breeds in moist forest, woodland, and ravines along streams, mature deciduous and mixed floodplain and swamp forests. Prefers areas with moderate to sparse undergrowth near rapid-flowing water of hill and mountain streams. Ground dweller. Eats

primarily aquatic insects, also small mollusks, killifishes, minnows, and salamanders. Forages mostly on or near the ground along streams or in damp or wet streambeds. Nests on the ground along stream banks, hidden in the underbrush or among the roots of fallen trees, in crevices or raised sites in tree roots, or in rock walls of ravines over water. The nest is a shallow cup constructed of decaying leaves and plant stems, pine needles, or small hemlock twigs. Clutch size varies from 4 to 7 eggs.

THREATS: Potential threats include forest fragmentation and activities that cause reductions in forest canopy cover or negatively impact aquatic insect communities. Streams affected by acid rain have lowered pH that reduces food availability.

CONSERVATION ACTION: Mixed woodlands containing streams should be safeguarded for this species. Further studies are needed within in the District.

SITE MAPS: 2, 5

REFERENCES: 1 – 4



District of Columbia

Bird Fact Sheet

Marsh Wren *Cistothorus palustris*



STATUS: Breeding Bird Survey (BBS) data from 1966 through 1989 show stable populations in the Eastern region; populations appear to be declining in Maryland. Critically imperiled within the District of Columbia.

RANGE: Breeds from British Columbia, central interior Canada, Manitoba, and Nova Scotia south to Mexico, Gulf Coast, and Florida. Winters across southern tier of states on West Coast north to Washington and east to New Jersey, and into southern Mexico. Passage migrant and breeder within the District of Columbia.

LOCAL HABITAT: Kenilworth Park and Anacostia Park.

SPECIES ECOLOGY: Freshwater and brackish marshes in cattails, tule, bulrush, and reeds. Nests in marsh vegetation; nesting success may be greatest in marshes

with relatively dense vegetation and deep water.

Feeds almost entirely on insects; beetles and flies rank highest in the Marsh Wren diet.

THREATS: The Marsh Wren faces the same threat as all wetland birds: the depletion of natural habitats. Development in or around wetlands - used both as wintering and breeding habitats - can greatly reduce local populations.

CONSERVATION ACTION: Preservation of marsh habitat is the key to the well being of the Marsh Wren. Restoration of wetlands, such as along the Anacostia River, would go a long way in bringing back healthy populations of this species within the District.

SITE MAPS: 3, 7

REFERENCES: 1 - 4



District of Columbia

Bird Fact Sheet

Northern Bobwhite *Colinus virginianus*



STATUS: North American Breeding Bird Survey (BBS) data indicate that, from 1966-1998, populations underwent a significant rangewide decline of 2.7%/year, and a highly significant average annual decline of 3.5% in the Eastern region from 1966-1989. Critically imperiled in the District of Columbia.

RANGE: Permanent resident from Kansas, Iowa, Pennsylvania, and Cape Cod southward. Fluctuating populations occur farther north and west. Recorded as a breeder in the District by the 1983-1987 Breeding Bird Atlas project, though recent efforts have not yielded a confirmed record.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Anacostia Park, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: Inhabits a wide variety of vegetation types, particularly early successional stages. Occurs in croplands, grasslands, pastures, fallow fields, grass-brush rangelands, open pinelands, open mixed pine-hardwood forests, and habitat mosaics. Forages individually or in groups (coveys) by picking food items off the ground or from vegetation that can be reached from the ground. Known to eat seeds of at least 650 plant species, including agricultural crops. Important plant foods include legumes, grasses, pine and oak mast, and fruits. Also consumes buds, tender

leaves, and a wide variety of arthropods. Northern Bobwhites construct well-concealed grass nests on the ground in grassy or weedy areas. Clutch size ranges from 6 to 25 eggs.

THREATS: Principal threat appears to be habitat loss and fragmentation associated with changing land use, particularly clean farming techniques, single crop production, plantation forestry, fire suppression, replacement of native grass pasture with Tall Fescue, and over-grazing by cattle.

CONSERVATION ACTION: Early-successional habitats are considered optimum in forested habitats. Optimum habitat has been described as consisting of 30-40% grassland, 40-60% cropland, 5-20% brushy cover, and 5-40% woodland cover. The species responds well to management and restoration potential is good. Further studies and monitoring are needed within the District.

SITE MAPS: 4, 6

REFERENCES: 1 – 4



District of Columbia

Bird Fact Sheet

Ovenbird *Seiurus aurocapilla*



STATUS: Breeding Bird Survey data from 1966 through 1989 show stable populations in the Eastern region and Maryland; however, data from 1980 through 1989 show a significant average annual decline of 3.5% in Maryland. Imperiled in the District of Columbia

RANGE: Breeds from west-central Canada east to Maritimes, and south to northern Gulf Coast states, and South Carolina. Winters most commonly in Mexico and the West Indies, while less so throughout Central America, and rarely to Colombia and Venezuela. Passage migrant, and recorded as a breeder in the District of Columbia by the 1983-1987 Breeding Bird Atlas project; recent monitoring efforts have not yielded a confirmed record.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Oxon Run Parkway, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: Typically nests in mid-late successional, closed-canopied deciduous or deciduous-coniferous forests that have deep leaf litter and limited understory. Found to be absent from, or in low densities in, young, shrubby, open-canopied forest stands. Forages for invertebrate prey, principally those that inhabit leaf litter, while walking or hopping along the ground. Prey is picked from leaf litter, off low vegetation, and the sides of

logs. The nest is an arched oven-like structure constructed of dead leaves, grasses, twigs, rootlets, bark, and moss; it's usually built in a slight depression on the forest floor. Clutch size varies from 3 to 6 eggs.

THREATS: The primary threat for this species comes from the elimination of its favored habitat through forest fragmentation due to continuing development as well as urban and suburban sprawl. Habitat fragmentation has resulted in increased Brown-headed Cowbird nest parasitism, increased nest predation by a variety of predators, and reduced pairing and reproductive success.

CONSERVATION ACTION: Although classified as a forest-interior, area sensitive species, the Ovenbird will nest in woodlots as small as 4 hectares in size. The minimum forested area required to maintain a viable breeding population in Maryland was estimated to be 100 hectares, though maximum densities occur in forested tracts greater than 2650 hectares. If setting aside large tracts is not possible, land managers should strive to minimize edge-to-interior ratios on small tracts, and prioritize for protection those small tracts in close proximity to forests that meet or exceed the minimum area requirement. Further monitoring is required within the District.

SITE MAP: 2

REFERENCES: 1 – 4

Species of Greatest Conservation Need



District of Columbia

Bird Fact Sheet

Prothonotary Warbler *Protonotaria citrea*



STATUS: Breeding Bird Survey (BBS) data show stable populations in the Eastern region, a significant population decrease in Virginia, and a non-significant trend in Maryland. Critically imperiled in the District of Columbia.

RANGE: Breeds mainly in southeastern states north to Minnesota, Michigan, and New York. Winters from Mexico through Netherlands Antilles east to Trinidad and Tobago, south on Caribbean slope of Central America to Nicaragua, both slopes of Costa Rica and Panama, and from Colombia east to northern Venezuela; barely reaches Suriname and northern Ecuador. Confirmed as a breeding resident in the District by the 1983-1987 Breeding Bird Atlas project, though recent efforts have not yielded a confirmed record.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Anacostia Park, Oxon Cove Park, Oxon Run Parkway (?), and the Fort Circle Parks area.

SPECIES ECOLOGY: Breeds in mature deciduous floodplain, river, and swamp forests; wet lowland forest. Primary habitats are almost always near standing water; swamps that are somewhat open with scattered dead stumps are preferred. Bottomland forests and extensive willow thickets near lakes or

ponds are also quite suitable. Requires dense underbrush along stream banks. Eats insects and spiders; forages on floating driftwood, half-submerged logs, tree trunks; probes bark crevices, rolled leaves, and tangles, occasionally takes fruits or nectar. Nests in cavity (natural, old woodpecker hole, bird box, etc.), in a snag or living tree, often or always near or over water. Clutch size ranges from 3 to 5 eggs.

THREATS: The primary threat in most areas is loss, degradation, and fragmentation of suitable habitat as many wetlands are either permanently drained or flooded. Loss of old growth forest associated with riparian habitats is detrimental because older trees are more likely to develop nesting cavities.

CONSERVATION ACTION: The Prothonotary Warbler is considered a forest-interior species. Older trees with cavities should be left intact. Permanently uncut buffer zones should be created on both sides of streams to provide thick and shady vegetation along stream banks; these buffer zones are recommended to be at least 90 m wide. Further monitoring is needed within the District.

SITE MAPS: 2, 5

REFERENCES: 1 – 4



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



Red-shouldered Hawk *Buteo lineatus*

STATUS: Breeding Bird Survey (BBS) data from 1966 through 1989 show a significant average annual increase of 2% in Maryland; data from 1980 through 1989 show a similar but greater increase of 5.7%. However, populations are much depressed, especially in the northern United States, compared to historic levels. Imperiled in the District of Columbia.

RANGE: Breeds from Minnesota east to New Brunswick and south to Gulf Coast and Florida, and on Pacific coast in California. Winters in breeding range north to southern New England. Resident, local migrant, and confirmed breeder in the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Anacostia Park, Oxon Run Parkway, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: Breeds in bottomland hardwoods and riparian areas to upland deciduous or mixed deciduous-conifer forest. Nesting areas are almost always found near some form of water, such as a swamp, marsh, river, or pond, and the habitat is usually well forested. Further, nesting habitat typically is mature forest with a well-developed high canopy and variable amounts of understory vegetation. In most areas seem to need tracts of at least 100-250 ha (but may use smaller forest patch if it is part of a larger forested ecosystem). Diet varies regionally and seasonally, sometimes annually depending on availability.

Common prey items include snakes, amphibians, small mammals, small lizards and young turtles. Relatively few birds, fishes, and crustaceans (such as crayfish) are consumed, though large insects are taken in considerable numbers, as well as miscellaneous invertebrates. The nest is usually built in the main crotch of a large, living tree in mature forest. Clutch size varies from 1 to 5 eggs.

THREATS: Favored habitat for this forest interior species has been reduced, modified or destroyed. Once the most common woodland hawk in the eastern region, this hawk is now much reduced in the northern part of its range. In many areas it has been replaced by the Red-tailed hawk as the most common hawk. Failure to maintain adequate uncut buffer zones around traditional nest sites might result in the local extirpation of the species.

CONSERVATION ACTION: The potential for recovery in forested and reforesting parts of its range is good, but only if these forests are allowed to develop a mature canopy structure. It is also important to retain tracts sufficiently large to support breeding pairs. In active nesting areas, human use and passage should be minimized or prohibited during nesting season (approximately March through July); it is recommended that a distance of at least 300 ft from the nest should be kept free from human disturbance. Disturbances in the nesting territory should be minimized until the young are at least two weeks old. Further monitoring is needed in the District.

SITE MAPS: 2, 5, 8

REFERENCES: 1 – 4



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



Scarlet Tanager *Piranga olivacea*

STATUS: Breeding Bird Survey (BBS) data show stable populations in the eastern United States. Maryland data for the same period indicate a significant average annual decline of 1.9% and a significant decline of 3.7% from 1980 to 1989. Imperiled in the District of Columbia.

RANGE: Breeds from extreme southeastern Canada to east-central United States. Winters from Panama (rarely) and Colombia south, through eastern Ecuador and Peru to northwestern Bolivia; apparently mainly in upper Amazonia. Passage migrant, and recorded as a breeder in the District of Columbia by the 1983-1987 Breeding Bird Atlas project; recent monitoring efforts have not yielded a confirmed record.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Anacostia Park, Capitol Hill Parks, Oxon Run Parkway, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: This forest interior species breeds in deciduous forest and mature deciduous woodland, including deciduous and mixed swamp and floodplain forests, and rich moist upland forests; prefers oak trees. Most abundant in areas with a relatively closed canopy, a dense understory with a high

diversity of shrubs, and scanty ground cover. Is able to breed successfully in relatively small patches of forest, as well as wooded parks, orchards, and large shade trees of suburbs. Eats insects and other invertebrates, and various fruits. Nestlings are fed insects and fruit. Forages primarily at mid-canopy (6-18 m off the ground). The nest is a loose construction of twigs, rootlets, grass, plant stems, bark, and occasionally string; it is lined with fine grass and sometimes pine needles. Nests are placed in trees, usually well out on a limb, commonly in oak. Clutch size varies from 2 to 4 eggs.

THREATS: The greatest threat is the continual loss and fragmentation of breeding and wintering habitat.

CONSERVATION ACTION: Critical habitat features that influence species success have not been thoroughly investigated. Further rangewide information on specific habitat requirements and the effects of habitat alteration is needed. Continued monitoring is appropriate within the District.

SITE MAP: 2

REFERENCES: 1 – 4



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



Sora

Porzana carolina

STATUS: Breeding Bird Survey data indicate a significant decline in central North America during 1966-1991 and a significant decline in central North America during 1982-1991; eastern region populations are stable. Status within the District of Columbia is undetermined.

RANGE: Breeds from British Columbia east through Mackenzie to Maritime Provinces, and south to Pennsylvania, Oklahoma, Arizona, and central California. Winters mainly along coasts north to California and Virginia. Passage migrant through the District of Columbia.

LOCAL HABITAT: Kenilworth Park, Anacostia Park, and Oxon Cove Park.

SPECIES ECOLOGY: Nesting habitat includes freshwater swamps, bogs, and swamps with dense stands of cattails, reeds, bulrushes, or sedges. Nest is constructed of dead cattails and other vegetation. Clutch size averages 10 to 12

eggs. In summer, adults feed predominantly on beetles, spiders, snails, and crustaceans; seeds of aquatic plants such as wild rice and bulrush predominate in fall and winter.

THREATS: Like for other wetland dependent species, Sora habitat within the District of Columbia is at risk through a combination of outright loss as well as degradation.

CONSERVATION ACTION: Conservation measures should primarily emphasize the protection and management of wetlands for rails. Further focused studies are needed to determine precise status and habitat use within the District.

SITE MAPS: 3, 7

REFERENCES: 1 - 4



District of Columbia

Bird Fact Sheet

Virginia Rail *Rallus limicola*



STATUS: Breeding Bird Survey data indicate a significant population decline in the central U.S. during 1982-1991, and stable populations in the Eastern Region. Possibly extirpated within the District of Columbia.

RANGE: Breeds from British Columbia east to Maritime Provinces, and south to southern California, Oklahoma, and Virginia. Winters regularly on coasts north to Virginia, and occasionally farther north. Passage migrant through the District of Columbia.

LOCAL HABITAT: Kenilworth Park, Anacostia Park, and Oxon Cove Park.

SPECIES ECOLOGY: Inhabits shallow, freshwater, emergent wetlands of every size and type, from roadside ditches and borders of lakes and streams to large cattail marshes. Capable of using very small marshes. The diet of Virginia Rails consists largely of larval insects (especially

flies) but also includes snails, small fishes, insects, crustaceans, and aquatic plants such as duckweed. They usually nest in the wetter portions of tidal marshes, often characterized by three-square, needlerush, narrow-leaved cattail, and other marsh grasses. The nest is a loosely woven, well-concealed cup of rather coarse vegetation and is sometimes covered with a grassy canopy. Clutch size ranges from 5 to 12 eggs.

THREATS: Habitat loss and degradation are significant threats, contributing to population declines.

CONSERVATION ACTION: Conservation measures should primarily emphasize the protection and management of wetlands for rails. Further focused studies are needed to determine precise status and habitat use within the District.

SITE MAPS: 3, 7

REFERENCES: 1 – 4



District of Columbia

Bird Fact Sheet

White-eyed Vireo *Vireo griseus*



STATUS: Breeding Bird Survey (BBS) data for the period 1966-1998 indicates a statistically insignificant decline of 0.1% per year in eastern North America. BBS data for Maryland from 1980 to 1989 show a significant average annual decline of 2.9%. Critically imperiled in the District of Columbia.

RANGE: Breeds from Nebraska, Illinois, Ohio, southeastern New York, and central New England south to eastern Texas and southern Florida. Winters from Gulf Coast states and Florida southward to Guatemala, Belize, and northwestern Honduras (casually to western Panama); also in Bermuda, Bahamas, Jamaica, Cuba, Cayman Islands, and Puerto Rico. Passage migrant and probable breeder in the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Anacostia Park, Oxon Run Parkway, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: During breeding season, inhabits early-late successional, shrubby habitats such as deciduous scrub, old fields, abandoned pastures, regenerating clearcuts or other heavily logged areas, drainage and streamside thickets, forest edges, reclaimed strip mines, and mangrove swamps. In Virginia, prefers habitats with extensive

undergrowth, shrubs, and tree saplings interspersed with widely spaced taller trees. Forages among woody vegetation, capturing invertebrates and plucking fruit. Mostly consumes animal matter, principally insects and spiders. The nest is constructed from bark shreds, leaves, grasses, as well as other soft plant fibers, and suspended from a fork of a branch. Clutch size ranges from 3 to 4 eggs.

THREATS: Perhaps a result of its preference for successional habitats and forest edges, White-eyed Vireo nests are heavily parasitized by Brown-headed Cowbirds (*Molothrus ater*) and are preyed upon by numerous predators. Land management areas in DC parks and recreational areas are often managed to purposely eliminate early-successional shrub habitat favored by this species.

CONSERVATION ACTION: Preservation of riparian thickets, brushy areas, and hedgerows are important. Due to strong breeding site fidelity, year-to-year maintenance of preferred breeding habitat is important in managing for this species. In view of recent population declines throughout much of its range, continued monitoring of this species is needed in the District.

SITE MAP: 6

REFERENCES: 1 - 4



District of Columbia

Bird Fact Sheet

Wood Thrush *Hylocichla mustelina*



STATUS: Breeding Bird Survey (BBS) data indicate a significant 1.9% annual decline (29% overall) occurred in North America from 1966 to 1999. Maryland data from 1980 through 1989 show a highly significant decline of 3.9%. Vulnerable in the District of Columbia.

RANGE: Breeds from Manitoba, Ontario, and Nova Scotia south to Florida and Gulf of Mexico. Winters from southern Texas south through eastern Mexico and Middle America to Panama and northwestern Colombia. Passage migrant and breeder in the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Anacostia Park, Kenilworth Park, Oxon Run Parkway, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: Breeds in deciduous or mixed forests with a dense tree canopy and a fairly well developed deciduous understory, especially where moist. Bottomlands and other rich hardwood forests are prime habitats. Also frequents pine forests with a deciduous understory and well-wooded residential areas. Recent research has shown that juveniles move out of mature forest and settle into dense early and mid-successional forest, riparian forest, and forest/field edges. Eats insects and other invertebrates (e.g., snails), and small

fruits; forages mainly on or near ground, sometimes in tree foliage. The nest is a substantial cup of plant material with a middle layer of mud and dead leaves. Clutch size ranges from 1 to 5 eggs.

THREATS: Habitat degradation and fragmentation are commonly cited as the biggest threats. With loss of habitat and increased conversion to agriculture and pine plantations, both brood parasitism and nest predation increase. The Brown-headed Cowbird is by far the most serious threat, causing significant population declines throughout much of the range.

CONSERVATION ACTION: The key habitat requirement is a moist woodland understory of deciduous shrubs or saplings; bottomland and other rich hardwood forests are prime examples. Well-wooded residential areas are also used. Probability of maximum breeding density is reached in woodlands of 500 ha. The importance of protecting large, unfragmented forests for breeding habitat cannot be overstated. Where possible, forest preserves should be on the order of 10,000+ ha because cowbirds routinely commute up to seven kilometers between feeding and breeding sites. Further monitoring is needed in the District.

SITE MAP: 2

REFERENCES: 1 - 4



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



STATUS: Breeding Bird Survey (BBS) data from 1978 to 1988 indicate a significant population decrease in eastern North America. Data from 1980 through 1989 indicate a decline in Maryland. Status is undetermined in the District of Columbia.

RANGE: Breeds from southeastern Iowa , Ohio, New York, and southern new England south to northeastern Texas, central Gulf Coast states, and eastern North Carolina. Winters from southern Mexico south along the Caribbean slope of Middle America to central Panama; also in the Bahama Islands, Greater Antilles, and Virgin Islands. Passage migrant and recorded as a breeder in the District by the 1983-1987 Breeding Bird Atlas project, though recent efforts have not yielded a confirmed breeding record.

LOCAL HABITAT: Rock Creek National Park, Oxon Run Parkway, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: Breeds in well-drained upland deciduous forests with understory patches of mountain laurel or other shrubs, drier portions of stream swamps with an understory of mountain laurel, deciduous woods near streams; almost always associated with hillsides. Well-drained oak and oak-hickory forests, flatland white oak forests along river terraces, and drier islands of nontidal forested wetlands are also used. Dense patches of shrubs or saplings may be an

Worm-eating Warbler *Helmitheros vermivorus*

important component of territories. Most abundant in mature woods but also may be common in young and medium-aged stands. Eats primarily caterpillars, various insects and spiders. Obtains food from live and dead foliage in spring and summer. Reaches into dead leaf clusters to remove caterpillars and spiders. Feeds at tree tops with early leaf-out and moves into subcanopy and understory as the summer progresses. Nests on the ground, usually on hillsides, in cryptic nests among dead leaves, usually against roots or stems of shrubs or saplings, in a slight cavity, or up against rock outcrops. Clutch size ranges from 3 to 6 eggs.

THREATS: Dependence on large, unfragmented forest tracts (300-1000 ha) for nesting may make this species highly vulnerable to anthropogenic alteration of tropical, broadleaved forests.

CONSERVATION ACTION: A good regional conservation strategy for worm-eating warblers is to identify, maintain, and restore the large tracts that are most likely to be population sources. Since this species is inconspicuous and easily overlooked during surveys, further studies are required to assess the conservation scenario for this species in the District.

SITE MAPS: 2

REFERENCES: 1 – 4



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



Yellow-throated Vireo *Vireo flavifrons*

STATUS: Breeding Bird Survey (BBS) data show stable populations for the Eastern region and Maryland. Imperiled in the District of Columbia.

RANGE: Breeds from Manitoba, Minnesota, Ontario, and central New England south to Gulf Coast states. Winters from extreme southern Florida, casually in southern California and the Virgin Islands (St. Thomas, St. John), Caribbean basin and Central America, through central Mexico south to northern South America, Trinidad, Tobago, Bahamas, Cuba; mainly in Central America. Passage migrant (breeder?) through the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Oxon Run Parkway (?), Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: Breeds primarily in open deciduous forest and woodland, mixed forest near clearings or water, moist upland forest riparian woodland, tall floodplain forest, lowland swamp forest; also orchards, groves, roadside trees. Most abundant in mature woods but also occurs in medium-aged forests and some pioneer stands; requires a high, partially open canopy and prefers woods with an intermediate tree density or basal area. Eats mainly insects (especially moths and caterpillars), bugs and beetles, as well as some

fruits, such as sassafras and grapes in the fall; forages among foliage in tops of trees. Usually nests in the canopy of a deciduous tree in a horizontal twig fork. The nest is a deep rounded cup made of plant fibers, covered with lichens and spider webs, and lined with fine grass. Clutch size ranges from 3 to 5 eggs.

THREATS: The principal threat to this species is the continual loss and fragmentation of habitat. Specific effects caused by habitat alterations are not clearly understood. Possible effects include increased nest predation by edge species (e.g. raccoons, domestic cats) and increased cowbird parasitism. Numbers decrease sharply in forests smaller than 100 hectares (250 acres) in the northeastern United States.

CONSERVATION ACTION: Preservation of extensive tracts of mature upland forest adjacent to floodplain forest is a step that should aid the Yellow-throated Vireo. However, knowledge of its biology and habitat requirements is limited. Critical habitat features that influence conservation success for this species have not been thoroughly investigated. Further studies are needed within the District.

SITE MAPS: 2, 5

REFERENCES: 1 – 4



District of Columbia

Bird Fact Sheet

Species of Greatest Conservation Need



Bald Eagle *Haliaeetus leucocephalus*

STATUS: Breeding Bird Survey (BBS) data from 1966 through 1989 show a highly significant average annual increase of 2.8% in Eastern region populations; Maryland shows a similar increase of 3.0%. Critically imperiled in the District of Columbia.

RANGE: Breeds from Alaska east to Newfoundland and south locally to California, Great Lakes, and Virginia; also in Arizona, along Gulf Coast, and in Florida. Formerly more widespread. Winters along coasts and large rivers in much of the United States. Migrant and breeder within the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Anacostia Park, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: Breeding habitat most commonly includes areas close to (within 4km) coastal areas, bays, rivers, lakes, or other bodies of water that reflect the general availability of primary food sources including fish, waterfowl, and seabirds. Preferentially roosts in conifers or other sheltered sites in winter in some areas; typically selects the larger, more accessible trees. Feeds

opportunistically on fishes, injured waterfowl and seabirds, various mammals, and carrion. Usually nests in the uppermost crotch of a tall coniferous or deciduous tree, or on cliffs near water. Loblolly Pine is the most commonly used tree species in Maryland. The nest is typically made of large sticks and branches, and is usually 5-6 ft. in diameter. Clutch size varies from 1 to 3 eggs.

THREATS: Major threats include habitat loss, disturbance by humans, biocide contamination, decreasing food supply, and illegal shooting. Loss of limited breeding habitat to urban development, and disturbance to breeding pairs are the two significant management issues within the District.

CONSERVATION ACTION: Protection of existing nest sites and maintaining suitable habitat throughout tidal waterways are critical to the continued existence of the Bald Eagle within the District of Columbia.

SITE MAPS: 1, 2, 9

REFERENCES: 1 – 3



District of Columbia

Bird Fact Sheet

Wood Duck *Aix sponsa*



STATUS: Data from the Breeding Bird Survey (BBS) from 1966-1989 indicate a significant average annual increase of 3.4% for the entire Eastern Region, and a stable or increasing population for the state of Maryland. Apparently secure within the District of Columbia.

RANGE: Breeds from British Columbia south to California, and from Montana east to Nova Scotia and south Texas and Florida; absent from Rocky Mountains and Great Plains. Winters near Pacific coast north to Washington, and to New Jersey in the East; rarely farther north. Resident and breeder within the District of Columbia.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, Anacostia Park, Oxon Run Parkway, Oxon Cove Park, and the Fort Circle Parks area.

SPECIES ECOLOGY: Inhabits quiet inland waters near woodland, such as wooded swamps, flooded forest, greentree reservoirs, ponds, marshes, and along streams. Winters on both freshwater and brackish marshes, ponds, streams, and estuaries. Eats seeds and other parts of aquatic plants, as well as aquatic and land insects. Winter diet consists almost entirely of plant material, with acorns often being important. Nests in cavities in large trees in forested wetlands, and in bird boxes, usually within 0.5 km of water and near forest canopy openings. Clutch size ranges from 1 to 32 eggs. Nests containing more than 15 eggs probably contain the clutch of more than one female. Such "dump nesting" is common in some Wood Duck populations.

THREATS: Loss, degradation, and modification of forested wetland habitats due to development, cutting of nesting trees, and alteration of hydrology.

CONSERVATION ACTION: Identify, restore, and protect forested wetlands, bottomland hardwood forest, and emergent herbaceous wetlands. Preserve and plant tree and shrub species preferred by wood ducks for feeding and nesting, especially large old growth hardwoods in and adjacent to wetlands. Restore hydrology to previously drained wetlands. Install artificial nest boxes in or near forested wetlands and emergent wetlands adjacent to forests, and establish woody riparian vegetation along streams.

SITE MAPS: 1, 5

REFERENCES: 1 – 5



District of Columbia

Mammal Fact Sheet

Species of Greatest Conservation Need

Eastern Small-Footed Myotis *Myotis leibii*



STATUS: Fairly widespread in southeastern Canada and eastern United States, but very spotted in distribution and rarely found in large numbers. Critically imperiled within the District of Columbia.

RANGE: Found from southern Ontario and northeastern United States to Maine south through Appalachian with isolated populations in Oklahoma, Arkansas, Missouri, and Kentucky.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The small-footed myotis occur in mountainous regions at elevations ranging from 240-1125m. They prefer eastern deciduous and coniferous forests and can roost in buildings, rock bluffs and turnpike tunnels. Mating occurs in autumn and sperm is stored in the female until

fertilization in the spring. Females give birth to a single young between late May and July. Little is known of their feeding habits although they appear to be insectivores. Favorite prey includes small insects such as flies, beetles, and moths.

THREATS: This species is most vulnerable during hibernation. Destruction of roost and foraging habitat, and pollution or siltation of waterway, and declines in insect production are all additional potential threats to this species.

CONSERVATION ACTION: Public education on the nature and value of bats is urgently needed. Identification of foraging areas and protection from pesticides and other poisons must a priority. Status surveys are needed.

SITE MAP: 2

REFERENCES: 1-5



District of Columbia

Mammal Fact Sheet

Species of Greatest Conservation Need

Gray Fox

Urocyon cinereoargenteus



STATUS: Widespread healthy populations are present in most areas where the species occurs. Vulnerable within the District of Columbia.

RANGE: Extreme southern Canada throughout the United States, except in Montana, Idaho, Wyoming and most of Washington. It ranges into Mexico and Central America.

LOCAL HABITAT: Rock Creek National Park and the Fort Circle Parks area.

SPECIES ECOLOGY: Gray foxes prefer mixed woodlands and pastures; dens in hollow trees, logs, thickets, or underground burrows. Rough, hilly terrain near streams and lakes provide ideal habitat for the gray fox. They mate for life; breed from January through

May; gestation 51-63 days; one litter per year; 3 -4 pups per litter; raised by both parents. They are omnivorous and will eat almost anything it comes across: mice, rats, grasshoppers, crickets, eggs, birds, acorns, berries, and apples.

THREATS: Major factors governing population of gray fox are food and cover. It is also subject to epizootics of rabies.

CONSERVATION ACTION: Additional surveys are needed to determine the distribution, habitat requirements, and life cycle of this species within the District. Adequate quality habitat should be maintained, and the population should be monitored.

SITE MAPS: 1, 2, 6, 8

REFERENCES: 1-7



District of Columbia

Mammal Fact Sheet



Northern River Otter *Lutra canadensis*

STATUS: The river otter has a large range, but has been virtually eliminated through many parts of its range. Recent reintroductions and management efforts have improved the species' conservation status. Critically imperiled within the District of Columbia.

RANGE: All of the United States and Canada except the tundra and parts of the arid southwestern United States.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The northern river otter primarily inhabits wooded shoreline areas of lakes, ponds, rivers and streams with waters rich in fish. They rarely frequent polluted waters or areas of high human population. Females mate in the spring shortly after giving birth to two to four young (or they might skip a year). The new litter of youngsters will not begin to develop until late in the fall. Their diet consists

of fish, crayfish, frogs, clams, muskrats, turtles, birds, small rodents and young rabbits.

THREATS: Since this species rarely frequents polluted waters or areas of high human population density, human encroachment and pollution have made some habitats unsuitable.

CONSERVATION ACTION: Little is known of the relative abundance and distribution of this species within the District. Additional surveys are needed to determine the distribution, habitat requirements, and life cycle of this species within the District. Maintaining water quality and suitable habitat within the District's major rivers, streams, and wetlands would benefit this otter species.

SITE MAPS: 1, 3, 7, 9

REFERENCES: 1-4



District of Columbia

Mammal Fact Sheet

Species of Greatest Conservation Need



Southern Bog Lemming *Synaptomys cooperi*

STATUS: This species is patchily distributed throughout its geographical range. Populations are usually scared and scattered, and this is thought to be due to competition with meadow voles. Vulnerable within the District of Columbia.

RANGE: From New Brunswick and Nova Scotia south along the Atlantic Coast to Virginia and in the Appalachian Mountains to western North Carolina. It occurs westward to western Kansas, Nebraska, South Dakota, western Minnesota, and eastern Manitoba.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Southern bog lemmings occurs mainly in sphagnum bogs, as its common name suggests, but it may also occur in grasslands, and in Canada it occurs in coniferous or deciduous forests. They typically breed from February to November.

Several litters may be produced each year. Litter sizes range from one to eight, although three to four is the usual size. They eat mostly vegetation such as grasses, sedges, mosses, fruits, fungi, bark and roots, some invertebrates such as slugs and snails are also taken.

THREATS: Habitat destruction and the overgrowth of bogs.

CONSERVATION ACTION: Developing and maintaining brackish and freshwater marshes would benefit this species, as would maintaining early stages of ecological succession in grasslands. Additional surveys are needed to determine the distribution, habitat requirements, and life cycle of this species within the District.

SITE MAPS: 1, 2, 3, 7, 9

REFERENCES: 1-4



District of Columbia

Mammal Fact Sheet

Species of Greatest Conservation Need

Southern Flying Squirrel *Glaucomys volans*



STATUS: The southern flying squirrel is common throughout most of its range within the United States. Secure within the District of Columbia.

RANGE: Occurs in Mexico and from the Gulf of Mexico through the eastern United States to the Great Lakes also in southern Ontario, southwestern Quebec and southern Nova Scotia. Resident in the District of Columbia.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Southern flying squirrels inhabit hardwood forests in eastern North America. Dead hollow trees are used as den sites. They usually have two litters a year, the first between April and early June, and the second between July and September. Litters contain 1 to 7 young. They eat a variety of different foods such as berries, fruits,

acorns, and nuts as well as insects, nesting birds and eggs, and the flesh of dead animals.

THREATS: Loss and degradation of habitat are the main factors limiting populations and forest fragmentation has reduced habitat area. Populations are also limited by competition for food with grey squirrels.

CONSERVATION ACTION: Enhancing and maintaining appropriate hardwood habitat allows for the continued existence of healthy populations. Additional surveys are needed to determine the distribution, habitat requirements, and life cycle of this species within the District.

SITE MAP: 2

REFERENCES: 1-3



District of Columbia

Mammal Fact Sheet

Species of Greatest Conservation Need



Virginia Opossum *Didelphis Virginiana*

STATUS: The Virginia opossum is represented by many and/or large occurrences throughout most of its range. Secure within the District of Columbia.

RANGE: United States east of the Rocky Mountains, and along the coast west of the Rockies from British Columbia, Canada into Mexico and Central America as far south as Costa Rica.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, and Fort Circle Parks area.

SPECIES ECOLOGY: The Virginia opossum is terrestrial and arboreal. It lives in virtually all areas, but prefers wooded land. They are solitary creatures and come together only to

breed. Breeding season starts in late winter. Females will have two or three litters each year with up to 13 young per litter. They are opportunistic feeders, eating fruits, vegetables, insects, snails, slugs, worms, rats, mice, shrews, moles, amphibians, snakes, eggs, fish, crayfish, and carrion.

THREATS: Their greatest threats include cars, domesticated pets, and humans.

CONSERVATION ACTION: Additional surveys are needed to determine the distribution, habitat requirements, and life cycle of this species within the District.

SITE MAPS: 1, 3, 7, 9

REFERENCES: 1-4



District of Columbia

Mammal Fact Sheet

Species of Greatest Conservation Need



Allegheny Woodrat *Neotoma magister*

STATUS: Populations in the northeastern United States have declined. Possibly extirpated within the District of Columbia.

RANGE: Southeastern New York southwest through much of Pennsylvania, extreme southern Ohio and Indiana, through western Maryland, all of West Virginia, most of Kentucky, and the western reaches of Virginia and North Carolina south through much of Tennessee, and into northern Alabama and most of northwestern Georgia.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The preferred habitat for the Allegheny woodrat is rocky areas in deciduous forests but they are most often found in caves and rocky cliffs. They also are found in wooded bottomlands,

swamps, and in outbuildings and abandoned structures. They breed from late winter to late summer. Females may have two to three litters per year, averaging two young in each litter. Their diet includes buds, leaves, stems, fruits, seeds, acorns and other nuts.

THREATS: Several factors may be contributing to the population decline, such as: 1) severe winter weather, 2) a decline in acorns due to defoliation of oak trees by gypsy moths which reduces winter food supply, 3) parasitic raccoon roundworm infection, 4) human disturbance and 5) habitat loss or alteration.

CONSERVATION ACTION: Additional surveys are needed to confirm presence and to subsequently determine the distribution, habitat requirements, and life cycle of this species within the District.

SITE MAPS: 2, 6

REFERENCES: 1- 5



District of Columbia

Mammal Fact Sheet

American Mink *Mustela vison*



STATUS: The American mink has a large range in North America, and despite local declines. It is secure in many areas, but critically imperiled with the District of Columbia.

RANGE: Found throughout the United States, appearing in parts of every state except Arizona and they are also present in most of Canada.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Minks tend to frequent forested areas that are in close proximity to water. Streams, ponds, and lakes, with some sort of brushy or rocky cover nearby are considered optimal territory. The breeding season begins in late February, and mating occurs until early April. A single annual litter of

four or five young is born around the first of May. They prey on mice, rabbits and other terrestrial animals they also eat fish, crayfish and other aquatic animals.

THREATS: The main threat within the District is destruction of habitat. The mink depends heavily on aquatic ecosystems. Stream channelization and erosion are major habitat threats that cause the declines in mink populations.

CONSERVATION ACTION: Creating, enhancing, and maintaining appropriate stream and wetland habitat. Additional surveys are needed to determine the distribution, habitat requirements, and life cycle of this species within the District.

SITE MAPS: 1, 3, 7, 9

REFERENCES: 1- 6



District of Columbia

Mammal Fact Sheet

Eastern Chipmunk *Tamias striatus*



STATUS: The eastern chipmunk is represented by many and/or large occurrences throughout most of its range. Secure within the District of Columbia.

RANGE: Southeastern Canada and northeastern U.S. east from North Dakota and east Oklahoma, and south to Mississippi, northwest South Carolina, and Virginia.

LOCAL HABITAT: Rock Creek National Park and the Fort Circle Parks area.

SPECIES ECOLOGY: Eastern chipmunks prefer deciduous woodlands, forest edges, and brushy areas. They can also be found in bushes and stonewalls in cemeteries as well as in and around suburban and rural homes with woodlot

edges. They mate in early spring producing one litter per year of 3–5 young that are born in May. Their diets consist primarily of grains, nuts, berries, seeds, mushrooms, insects, and salamanders, but they also prey on young birds and their eggs.

THREATS: This species is may be negatively affected by forest fragmentation, possibly through increased rates of predation. The biggest threat in suburban areas is the house cat.

CONSERVATION ACTION: A comprehensive campaign to encourage owners to keep cat indoors would benefit this species within the District.

SITE MAPS: 2, 6, 8

REFERENCES: 1 - 6



District of Columbia

Mammal Fact Sheet



U.S. Fish and Wildlife

Eastern Cottontail *Sylvilagus floridanus*

STATUS: The eastern cottontail is represented by many and/or large occurrences throughout most of its range. Secure within the District of Columbia.

RANGE: The eastern cottontail can be found in most of the eastern United States except for New England.

LOCAL HABITAT: Rock Creek National Park, Kenilworth Park, and Fort Circle Parks area.

SPECIES ECOLOGY: The eastern cottontail prefers habitats that are between woody areas and open land. It can be found in bushy areas, fields, woodlands, swamps and thickets. It mates between February and September. The female gives birth about a month after mating and produces between one to nine young, but the average litter size is four to five young. It eats a variety of different

plants including grasses, clover, fruits and vegetables. In the winter it eats the woody parts of plants like the twigs and the bark of brambles, birch, oak, dogwood and maple trees.

THREATS: Even though secure on a global and regional scale, this species is restricted to fairly small habitat areas within the District that are constantly under threat from ongoing urbanization.

CONSERVATION ACTION: Additional surveys are needed to determine the distribution, habitat requirements, and life cycle of this species to keep it abundant and common in the District. Adequate quality habitat should be ensured, and the population should be monitored.

SITE MAP: 4

REFERENCES: 1 – 3



District of Columbia

Mammal Fact Sheet

Species of Greatest Conservation Need



STATUS: The eastern red bat is North America's most abundant "tree bat." Apparently secure within the District of Columbia.

RANGE: Widespread across much of North America from southern Canada, south through Central America to northern South America; absent only from the Rocky Mountains and southern Florida.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Eastern red bats inhabit forests, roosting primarily beneath clusters of leaves during spring, summer and fall. They prefer forested areas, wooded hedgerows, and areas with large shade trees (e.g., city parks). They are rarely if ever observed in caves. Mating occurs in flight during the

Eastern Red Bat *Lasiurus borealis*

months of August and September. Young are born in late May through June with an average litter size between 2 - 4 pups. They consume predominantly moths.

THREATS: Even though secure on a global and regional scale, this species is restricted to fairly small habitat areas within the District that are constantly under threat from ongoing urbanization.

CONSERVATION ACTION: Additional surveys are needed to determine the distribution, habitat requirements, and life cycle of this species in the District. If the species is located, sites should be acquired or protected, high levels of habitat quality should be ensured, and the population should be monitored.

SITE MAPS: 2, 8

REFERENCES: 1 - 5



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need



Common Musk Turtle *Sternotherus odoratus*

STATUS: Apparently secure within the District of Columbia.

RANGE: New England to Southern Ontario to Southern Florida; west to Wisconsin and Texas.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The common musk turtle *aka* "sinkpot" prefers bodies of water such as lakes, ponds, and quite streams. They are secretive and rarely bask, but can be found as far up as six feet in trees near the water. They nest February to June, depending on latitude and mate underwater. Musk turtles lay 1-9 off-white with stark white band, thick-shelled, elliptical eggs under rotting stumps or in a wall of a muskrat lodge. They consume mostly animal proteins when young, but as adults they tend to be omnivorous. Typical food choices are insects, crayfish, snails, fish, tadpoles, and nearly anything it can catch.

THREATS: Intensive development, nitrification, altered drainage, vegetative changes and pollution. Individuals are regularly injured or killed from fishing and from contact with boat propellers.

CONSERVATION ACTION: Appropriate management of suitable wetland complexes, and educating the public regarding turtle-safe boating practices would help in conserving this as yet common species. Further focused studies are needed to determine precise status and habitat use within the District.

SITE MAPS: 1, 3, 7, 9

REFERENCES: 1-7



District of Columbia

Reptile Fact Sheet

Bog Turtle *Clemmys muhlenbergii*



STATUS: The US Fish & Wildlife Service has listed the northern population (New York and Massachusetts to Maryland and Delaware) as “Threatened” and the southern population (Virginia, North Carolina, South Carolina, Tennessee, Georgia) as “Threatened due to similarity of appearance.” Nearly half of the historic occurrences in Maryland have been extirpated. Presumed extirpated within the District of Columbia. Cryptic, hard to find even when present in good numbers; easily overlooked.

RANGE: New York to North Carolina and extremely northeastern Georgia.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Bog turtles prefer clear-cool, shallow, slow moving waters and inhabit marshy meadows, swamps, sphagnum bogs and pastures with soft, muddy bottoms. They breed late April to

early June. They lay 2 to 5 (usually 2-3) eggs in June to July. The eggs are left unattended to develop and hatch. Their diet includes snails, worms, slugs, millipedes, plant seeds and carrion.

THREATS: Intensive development, nitrification, altered drainage, vegetative changes and pollution. Decline is due primarily to loss, degradation, and fragmentation of habitat, and excessive (and illegal) collecting for the pet trade.

CONSERVATION ACTION: This species would benefit from the acquisition and appropriate management of suitable wetland complexes. Selective cutting, burning (if possible), periodic mowing, and grazing may be appropriate management techniques for maintaining habitat. Establishing location and long-term studies of populations within the District is urgently needed.

SITE MAPS: 1, 5, 10

REFERENCES: 1- 5

Species of Greatest Conservation Need



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need



Corn Snake *Elaphe guttata guttata*

STATUS: The status of corn snakes within the District of Columbia is undetermined.

RANGE: In North America they can be found from New Jersey west to Colorado and south to the Florida Keys and from Nebraska to Central Mexico.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Corn snakes prefer wooded areas, wood lots, rocky slopes, deciduous forests, and pine barrens. It is semi-arboreal (tree climbing), but spends much of its time underground, resting in or prowling through rodent burrows or other subterranean passageways. It breeds in the spring. Eight to twenty eggs are laid in late May or early June with the eggs hatching in August or September. It feeds on small mammals, birds, frogs, and lizards.

THREATS: Corn snakes are often mistaken for copperheads and sometimes killed because of this. Sometimes they are captured in the wild to be sold as pets. However, there are many snake breeders, so wild capturing does not pose a serious threat to this species.

CONSERVATION ACTION: Basic monitoring of local populations is needed within the District of Columbia.

SITE MAP: 6

REFERENCES: 1 - 5



District of Columbia

Reptile Fact Sheet

Eastern Box Turtle *Terrapene carolina*



STATUS: Large range in eastern North America; locally abundant in most parts of its range, but declining in some areas. Vulnerable within the District of Columbia.

RANGE: Northeast Massachusetts to Georgia, west to Michigan, Illinois, and Tennessee.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Box turtles favor open woodlands, wetland areas, and meadows. They prefer moist environments and spend most of their time buried in leaves and dirt. In hot, dry weather they can be found enter water, mud, and damp ground. They nest May to July and lay 3-8 eggs (elliptical in shape and about 3.5 cm

long) in loose soil about 7 cm deep. They are omnivores and eat everything from grass, leaves, crustaceans, berries, mushrooms, earthworms, insects, slugs, snails, amphibians, lizards, and fish.

THREATS: Recent declines are a result of habitat loss and fragmentation and over-collecting for the pet trade.

CONSERVATION ACTION: Establishing locations and long-term studies of populations within the District is urgently needed.

SITE MAPS: 2, 4, 5, 6, 7, 8

REFERENCES: 1 - 6



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need

Eastern Garter Snake *Thamnophis sirtalis*



STATUS: Apparently secure within the District of Columbia.

RANGE: Ranges over much of North America, from southern Canada to southern California, central Utah, Chihuahua, Texas, Gulf Coast, and southern Florida. Resident within the District of Columbia.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The eastern garter snake can be found in wet woodlands, meadows, marshes and along drainage ditches and streams. It is diurnal usually hunting and living in moist habitats. They can tolerate very cold weather but will hibernate during the winter. During this period, garter snakes will come together in large numbers to

hibernate. They breed in the spring and the young are born alive in late summer or autumn. There may be 10-70 or more in a litter. They feed on frogs, toads, salamanders, earthworms, mice, minnows, bird eggs, and carrion.

THREATS: Little is known about the threats facing this rather widespread and adaptable species within the District of Columbia.

CONSERVATION ACTION: Due to the rather generalist ecology of this widespread species, many management activities could potentially benefit the snake. Basic monitoring of local populations is needed with the District of Columbia.

SITE MAPS: 4, 5, 7, 8

REFERENCES: 1- 4



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need

Eastern Hognose Snake *Heterodon platirhinos*



STATUS: Possibly extirpated within the District of Columbia.

RANGE: From southern Pennsylvania to Florida, west to the prairie lands of Texas to southern Iowa & Wisconsin.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The Eastern hognose snake prefers sandy areas, but can be found in fields, open grassy areas adjacent woods, and open pine, mixed pine-hardwood, and hardwood forests. It breeds in the spring. The eastern hognose snake is oviparous and lays 10 - 30 eggs in sandy areas. Its prey consists of frogs, toads and insects.

THREATS: Little is known about the threats facing this species within the District of Columbia.

CONSERVATION ACTION: Basic monitoring of local populations is needed within the District of Columbia.

SITE MAPS: 2, 4, 8

REFERENCES: 1- 3



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need



Eastern Mud Turtle *Kinosternon subrubrum*

STATUS: Apparently secure within the District of Columbia.

RANGE: Found as far north as Long Island down to south Florida and around the Gulf coast to eastern parts of Texas.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The mud turtle is semi-aquatic and spends time on land and water environments. Shallow waterways such as streams and marshes serve as ideal environments as does ponds, rivers, and lakes. It has a distinct tolerance to brackish water. Mud turtles are even found in temporary wetlands, burrowing into the mud when the wetland dries. Adults mate in spring, and in June the females lay between one and six elliptical eggs in holes dug in sandy soil or among disintegrating plants. Mud turtles feed on a wide variety of aquatic

organisms and probably also eat aquatic plants.

THREATS: Main threats are loss of habitat (largely a result of water pollution and wetland drainage), and migrating individuals killed by vehicular traffic.

CONSERVATION ACTION: Recommended habitat management activities include elimination of barriers that hinder migration between ponds and nest or hibernation sites, placement of "turtle crossing" signs to warn motorists of the turtle's presence in key areas, and maintenance of open areas for nesting. Basic monitoring of local populations is needed within the District of Columbia.

SITE MAPS: 1, 3

REFERENCES: 1-5



District of Columbia

Reptile Fact Sheet



Spotted Turtle *Chrysemys guttata*

STATUS: The spotted turtle is locally common in many portions of its overall range, but apparently declining in some areas. Critically imperiled within the District of Columbia.

RANGE: The range extends from southern Maine and extreme southern Ontario west to Illinois and south to northern Florida. Isolated colonies can be found in southern Quebec, southern Ontario, central Illinois, central Georgia and north-central Florida.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Spotted turtles prefer marshy meadows, bogs, swamps, ponds, ditches and other small bodies of still water. They need clean, shallow, slow-moving water with muddy or mucky bottoms with some aquatic vegetation. Courtship begins in March to May, and in June females deposit up to 8 (typically 3-5) flexible-shelled, elliptical eggs. Their diets consist of larval

amphibians, slugs, snails, crayfish, insects, worms, and carrion.

THREATS: Primary threats to this species are habitat fragmentation and alteration, grazing, draining and filling of wetlands, road mortality, collecting, artificial control of water levels, and pollution. The small wetlands favored by this species are often not protected by wetland conservation laws.

CONSERVATION ACTION: Wetland restoration and landscape level planning can increase the connections among suitable habitat patches for this species; this could help improve the security of existing populations. Preventing the invasion of non-native plants (e.g., purple loosestrife) and eradicating them from spotted turtle habitat is essential. Basic monitoring of local populations is needed within the District of Columbia.

SITE MAPS: 1, 3

REFERENCES: 1 - 4



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need



Eastern Ribbon Snake *Thamnophis sauritus*

STATUS: Apparently secure within the District of Columbia.

RANGE: East of the Mississippi River, from Michigan, southern Ontario, and southern Maine south to the Florida Keys and southeastern Louisiana. Resident within the District of Columbia.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The eastern ribbon snake is a semi-aquatic snake that prefers wet meadows, marshes, bogs, ponds, weedy lake shorelines, swamps, and shallow-meandering streams. It likes to bask in bush and when startled it will glide swiftly across the water's surface. Mating takes place in the spring with 3 - 26 young born live in July and August. It

feeds on frogs, salamanders, and small fish.

THREATS: Little is known about the threats facing this species within the District of Columbia.

CONSERVATION ACTION: Basic monitoring of local populations is needed within the District of Columbia.

SITE MAPS: 1, 3, 4, 5

REFERENCES: 1-3



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need

Eastern Worm Snake *Carphophis amoenus amoenus*



STATUS: Apparently secure within the District of Columbia.

RANGE: Southern New England southward through the Carolinas to northern Georgia, and westward to southern Ohio and northeastern Mississippi. Resident within the District of Columbia.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The eastern worm snake prefers moist forest and hillsides near streams. They will hide under rocks or debris, rotting logs, or burrow underground. The worm snakes breeds in the spring and fall and lay one to eight eggs in early summer. Their diets consist of earthworms and soft-bodied insects.

THREATS: Little is known about the threats facing this species within the District of Columbia.

CONSERVATION ACTION: Basic monitoring of local populations is needed within the District of Columbia.

SITE MAPS: 4, 6

REFERENCES: 1-6



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need

Eastern Fence Lizard *Sceloporus undulates*



STATUS: Possibly extirpated within the District of Columbia.

RANGE: Ranges from New York to Florida, west to Utah and Arizona, north to South Dakota and central Indiana, south to Gulf Coast and Zacatecas.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Fence lizards prefer rocky, wooded areas, dry hillsides, and sunny, open woodlots. They are most common along forest edges and often inhabit rotting logs or stumps. Mating occurs in April or May. Five to 15 eggs are laid in soil and rotting logs and under surface debris in June, July, or early August. Fence lizards mainly eat spiders, but also consume grasshoppers, beetles, caterpillars and snails.

THREATS: Very little data exists on this species within the District of Columbia.

CONSERVATION ACTION: Establishing location and long-term studies of populations within the District is urgently needed.

SITE MAPS: 4, 6

REFERENCES: 1-5



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need



Five-lined Skink *Eumeces fasciatus*

STATUS: Apparently secure within the District of Columbia.

RANGE: Found from southern New Mexico to northern Florida, west to east Texas, north to Kansas, Wisconsin and Southern Ontario.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Five-lined skinks prefer humid woodlands with decaying leaf litter, stumps and logs. They like open hardwood forest, forest edges, and cutover woodlands. Mating takes place in the spring, and the female lays from 4 - 14 eggs in late spring or early summer. Their diets consist of crickets, grasshoppers, beetles, earthworms, snails, slugs, isopods, caterpillars, other lizards, and small mice.

THREATS: Little is known about the threats facing this species within the District of Columbia.

CONSERVATION ACTION: Basic monitoring of local populations is needed with the District of Columbia.

SITE MAP: 2

REFERENCES: 1-4



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need

Northern Black Racer *Coluber constrictor constrictor*



STATUS: Apparently secure within the District of Columbia.

RANGE: Found in the eastern part of North America from Canada to Florida.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The northern black racer can be found in a variety of habitats including forests, open areas, and edges of forests near open fields. It is most commonly found in open land, such as meadows, fields, and farmland. It has no known association with waterways. This snake mates in May and June and female lays 10-20 eggs in late June or July. It feeds primarily on small rodents, frogs,

and young snakes, and is a valuable destroyer of pests.

THREATS: Little is known about the threats facing this rather widespread and adaptable species within the District of Columbia.

CONSERVATION ACTION: Basic monitoring of local populations is needed within the District of Columbia.

SITE MAPS: 4, 6

REFERENCES: 1- 5



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need

Northern Brown Snake

Storeria dekayi



STATUS: Apparently secure within the District of Columbia.

RANGE: From southern Quebec and New England southward to North Carolina, and westward to Ohio and eastern Kentucky.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Northern brown snakes can be found in dense forest to open grassland. They are most common in and around abandoned buildings and development, but can also be found in empty lots, under trash, logs, and rocks. Most northern brown snakes are commonly seen near aquatic environments. They breed in spring and

give birth to 3-20 living young at a time. They feed on slugs, earthworms, slugs, snails, soft-bodied insects and larger specimens will eat frogs and tadpoles.

THREATS: Little is known about the threats facing this rather widespread and adaptable species within the District of Columbia.

CONSERVATION ACTION: Basic monitoring of local populations is needed within the District of Columbia.

SITE MAPS: 2, 5, 6, 8

REFERENCES: 1- 5



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need



Northern Copperhead *Agkistrodon contortrix*

STATUS: The northern copperhead has no special status federally. It is critically imperiled within the District of Columbia.

RANGE: From Mexico north into the central United States and in the east from the tip of Florida to the New England states.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Northern copperheads prefer terrestrial and semi-aquatic habitats that have rocky areas with debris-covered slopes or rock outcrops. They also can be found in wood piles, sawdust piles, rock piles and brush piles. Mating can occur in the late spring or early

fall, but females can store sperm for long periods of time. Thus, several males may successfully mate with a single female resulting in multiple paternities within a single litter. Young snakes are usually born in September and October. Copperheads are carnivores surviving on a diet of mice, lizards, birds, amphibians, insects, and small snakes.

THREATS: Little is known about the threats facing this species within the District of Columbia.

CONSERVATION ACTION: Basic monitoring of local populations is needed within the District of Columbia.

SITE MAPS: 2, 5

REFERENCES: 1-4



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need



Northern Ringneck Snake *Diadophis punctatus edwardsii*

STATUS: Apparently secure within the District of Columbia.

RANGE: Occurs throughout eastern and central North America. The range extends from Nova Scotia and southern Quebec and Ontario to south-central Mexico, covering the entire eastern seaboard except for areas along the gulf coasts of south Texas and northeast Mexico. The range extends laterally to the Pacific coast except for large areas in drier regions of the western United States and Mexico.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The preferred habitat for the northern ringneck snake consists of rocky ledges near rivers in shady or heavily wooded damp areas. It usually hides under logs, rocks, leaf litter, or matted plants. Mating occurs in spring

or fall (delayed fertilization is possible) and eggs are laid in June or early July. Females lay eggs about 3-10 eggs laid at one time. This snake's diet consists of small salamanders, lizards, and frogs, as well as earthworms and juvenile snakes of other species.

THREATS: Little is known about the threats facing this rather widespread and adaptable species within the District of Columbia.

CONSERVATION ACTION: Basic monitoring of local populations is needed within the District of Columbia.

SITE MAP: 2

REFERENCES: 1-4



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need



Queen Snake *Regina septemvittata*

STATUS: Critically imperiled within the District of Columbia.

RANGE: Pennsylvania west to southeastern Wisconsin, south through much of the eastern United States to the Gulf Coast.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Queen snakes have a very specific habitat. They are found in or near shallow, clear spring-fed streams with moderate to fast currents and rocky bottoms. They can also be found in canals or ponds. Mating can take place during the fall or spring; Females produce 5-23 young (on average 6-20 young) born in August or early September. They feed almost exclusively on freshly molted crayfish.

THREATS: Habitat loss, especially due to urban encroachment, is the most

significant threat to this species in the United States. Their extremely specialized habitat requirements restrict them to certain areas, with large gaps of unfavorable habitat in between populations. Water pollution is another potential limiting factor, since increased runoff and siltation in many streams have resulted in die-off of crayfish prey. They are susceptible to mercury toxicity through eating mercury-contaminated crayfish and other pollutants are able to pass directly through their highly permeable skin.

CONSERVATION ACTION: Effective management of appropriate habitat is the urgent conservation requirement for this species. Basic monitoring of local populations is needed within the District of Columbia.

SITE MAPS: 1, 2

REFERENCES: 1-5



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need

Eastern Redbelly Turtle

Pseudemys rubriventris (*Chrysemys rubriventris*)

AKA: Northern Red-bellied Turtle, Plymouth Red-bellied Turtle



STATUS: The Plymouth Red-bellied Turtle, a population of the Eastern Redbelly Turtles (sometimes known as *Pseudemys rubriventris bangsi*), is on the U.S. Endangered Species List. Apparently secure within the District of Columbia.

RANGE: Mid-Atlantic coastal plain from southern New Jersey to northeastern North Carolina, and west in the Potomac River.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The redbelly turtle prefers relatively large, deep creeks; rivers, ponds, lakes and marshes with ample basking sites. This species tolerates brackish water conditions, but is usually a freshwater turtle. It nests June

to July and lays 8-20 elliptical eggs. It feeds on a variety of aquatic animals and plants, but fish are not normally part of the diet.

THREATS: Limited habitat from industrial uses, urbanization, drainage and/or filling of wetlands and pollution.

CONSERVATION ACTION: This species would benefit from appropriate management of suitable wetland complexes. Basic monitoring of local populations is needed within the District of Columbia.

SITE MAPS: 1, 3

REFERENCES: 1-4



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need



Rough Green Snake *Opheodrys aestivus*

STATUS: The population trend for the rough green snake is probably relatively stable overall, with local declines associated with habitat loss. Apparently secure within the District of Columbia.

RANGE: Southern New Jersey west to Eastern Kansas, south to Florida Keys west through Texas into Eastern Mexico.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The rough green snake can be found in areas of thick, green vegetation. Small trees, bushes, briar patches, and tangles of vines are their favorite areas. They are attracted to lush green vegetation overhanging streams, but can also be found in gardens and are able to maintain their populations in developed areas as long as adequate greenery is left in backyards and parks. The rough green

snake lays up to a dozen eggs in rotting logs or stumps during June or July. The eggs hatch in late summer. They mainly consume grasshoppers, crickets, caterpillars, spiders, small frogs, and snails or slugs.

THREATS: Clearing of wooded wetlands and wooded borders of aquatic habitats is a potential threat, as is pesticide application in such habitats.

CONSERVATION ACTION: The protection of several large tracts of optimal habitat well dispersed throughout its range is the management requirement for this species. Discourage application of pesticides in or near wooded wetlands should be discouraged.

SITE MAPS: 2, 4, 5

REFERENCES: 1-3



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need

Northern Scarlet Snake *Cemophora coccinea copei*



STATUS: Possibly extirpated within the District of Columbia.

RANGE: Extreme southern Delaware to the Florida panhandle, west to Louisiana, eastern Oklahoma and extreme eastern Texas.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The scarlet snake prefers a hardwood habitat mixed or pine forest and adjacent open areas with sandy or loamy well-drained soils. It may occasionally be found under rotting logs or stones or unearthed by plows. They lay 3-8 elongated leathery eggs in June that hatch in late summer. Eggs of other reptiles appear to be their preferred food.

THREATS: Little is known about the threats facing this species within the District of Columbia.

CONSERVATION ACTION: Basic monitoring of local populations is needed within the District of Columbia.

SITE MAP: 2

REFERENCES: 1-4



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need



Timber Rattlesnake *Crotalus horridus*

STATUS: This species has a large range in the eastern United States, but occurrence is spotty in most regions. It is declining or extirpated in all northeastern states. Possibly extirpated within the District of Columbia.

RANGE: Most of eastern half of the United States from southern New Hampshire south through the Appalachian Mountains to northern Georgia and west to southwestern Wisconsin and northeastern Texas.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Timber rattlesnakes inhabit deciduous forests in rocky terrain. They occupy heavily vegetated, rock outcrops on partially forested hillsides. Mating occurs in the spring and fall and females give

birth to 4-14 (average 9) young every three to five years. Young are born during late August to mid-September. Rattlesnakes eat mice, rats, squirrels, rabbits, bats and other small mammals.

THREATS: Development, illegal collecting, and disturbance by recreational users are the most common threats as is timber rattlers low rate of reproduction. Limited appropriate habitat and altered habitat by human activities also threatened this species.

CONSERVATION ACTION: There is an urgent need for population surveys for this species within the District to identify existing den sites, assess population size, reproductive success and any threats to existing habitat.

SITE MAP: 2

REFERENCES: 1-4



District of Columbia

Reptile Fact Sheet

Species of Greatest Conservation Need

Chrysemys picta picta



STATUS: This species is represented by many and/or large occurrences throughout much of its large range. Very abundant in suitable habitat in most areas. Secure within the District of Columbia.

RANGE: Found across the entire North American continent, occurring from southern Canada to northern Mexico and from the northwestern to the southeastern United States.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The eastern painted turtle is found in slow-moving, shallow water (streams, marshes, ponds, lakes, or creeks) containing soft bottom, suitable basking sites, and aquatic vegetation. It may colonize seasonally-flooded areas near permanent water.

Mating occurs at the bottom of the body of water and egg-laying takes place during June and July. Painted Turtles lay a clutch containing between 4 to 20 eggs in open areas that are exposed to the sun for much of the day. In general, it eats insects, crayfish, mollusks, and aquatic vegetation.

THREATS: Localized threats from habitat degradation, road mortality, and human associated increase in predators (e.g., raccoons) are causes for concern.

CONSERVATION ACTION: Recommended habitat management activities include placement of "turtle crossing" signs to warn motorists of the turtles' presence in key areas. Basic monitoring of local populations is needed within the District of Columbia.

SITE MAPS: 1, 2, 3

REFERENCES: 1- 5



District of Columbia

Reptile Fact Sheet

Wood Turtle *Clemmys insculpta*



STATUS: The wood turtle is apparently declining throughout its range, but survey data are scanty. Possibly extirpated within the District of Columbia.

RANGE: Original North American range extends from Nova Scotia to eastern Minnesota, south to northeastern Iowa, east to Virginia and north to New York.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The wood turtle prefers lowland hardwood forests and open meadows associated with moderate to fast current streams and rivers with sand or gravel substrates. They are freshwater turtles that can use clear streams, rivers and woodland ponds that are relatively remote. They mate in spring and fall, in or out of water. A clutch of 4 to 17 white, smooth eggs laid in June will hatch in

September. Wood turtles are omnivores that eat insects, mollusks, carrion, worms, blackberries, dandelions, mullen sorrel, strawberries, sedges, grasses, filamentous algae, and mushrooms.

THREATS: Threats include heavy bank erosion, increased small mammal populations (nest predators), water pollution, and vehicular traffic. Formerly reduced by biological supply houses and pet trade industries.

CONSERVATION ACTION: May benefit from watershed management aimed at reducing erosion and sedimentation. Habitat improvement is probably best aimed at nesting, basking, and hibernating sites. Basic monitoring of local populations is needed within the District of Columbia.

SITE MAPS: 1, 2, 3

REFERENCES: 1-5



District of Columbia

Amphibian Fact Sheet

Species of Greatest Conservation Need



American Toad *Bufo americanus*

STATUS: The American toad has a large range in eastern North America, high abundance, and many stable populations within the United States. Secure within the District of Columbia.

RANGE: Found in most areas of eastern Canada (southeast Manitoba to Labrador) and the United States (Minnesota east to New England and south to northeastern Louisiana, western Mississippi, northern Alabama and Georgia and western North and South Carolina). Resident in the District of Columbia.

LOCAL HABITAT: Data gap; more information forthcoming.

SPECIES ECOLOGY: American toads are found in woodlands. They are also common in cities and towns, parks, backyards, and gardens. They hide under rocks or logs during the day. They only need semi-permanent water for reproduction. Mating starts in March or April. Eggs encased in long spiral tubes

of a jelly-like substance are laid in two separate strings with thousands of eggs in each string. Toads eat anything small that they can fit into their mouths, which are mostly insects and various other invertebrates.

THREATS: Dispersing juveniles tend to avoid canopy habitat, so deforestation and fragmentation likely reduce dispersal rates between local populations and could negatively impact population persistence in altered landscapes. Pollution tends to be a limiting factor in population declines.

CONSERVATION ACTION: Basic monitoring of local population is needed with the District of Columbia.

SITE MAPS: 1, 2, 3, 5, 12

REFERENCES: 1- 7



District of Columbia

Amphibian Fact Sheet

Species of Greatest Conservation Need



Bullfrog *Rana catesbeiana*

STATUS: The bullfrog is represented by many and/or large occurrences throughout most of its range. Apparently secure within the District of Columbia.

RANGE: Eastern and central USA; introduced in western areas and in Mexico, Cuba, and Northern Italy.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Bullfrogs occupy permanent freshwater habitats such as ponds, rivers, lakes, reservoirs, marshes, stock ponds, ditches and irrigation canals. They may be found in deep or shallow water. Bullfrogs, unlike many other North American anurans, remain reproductively active throughout much of the summer. The breeding season, depending upon temperature, may extend from March through August.

Female bullfrogs generally lay only once a year, producing as many as 20,000 eggs at a time. The bulk their diet consist of insects, spiders, crayfish and other invertebrates, but they may also consume mice, small turtles, fish, snakes (including rattlesnakes), birds and other amphibians. A bullfrog will eat about anything it can get in its mouth.

THREATS: There are no threats to this species in the United States. Rapid urbanization within the District raises concern for this species, just as it does for most other amphibians.

CONSERVATION ACTION: Basic monitoring of local populations is needed within the District of Columbia.

SITE MAPS: 1, 3, 9

REFERENCES: 1 - 3



District of Columbia

Amphibian Fact Sheet

Species of Greatest Conservation Need

Northern Dusky Salamander *Desmognathus fuscus*



STATUS: The Fowler's Toad is represented by many and/or large occurrences throughout most of its range. Secure within the District of Columbia.

RANGE: Found in the Appalachian region from New Brunswick and Quebec south to Indiana and South Carolina.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The northern dusky salamander is found primarily in areas with limestone. It lives at the edges of rocky streams, hillside springs, and spring seepages. They prefer wooded or partially wooded habitats, and spend much of their time under flat rocks, logs, or other debris, especially near water. In the late summer females lay about 20 eggs under rocks or debris or around streams. They guard the eggs until they hatch into aquatic larvae. Larvae transform the following spring.

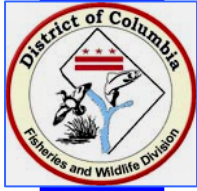
This species feeds primarily on small insects, spiders, isopods, centipedes and oligochaetes.

THREATS: Populations may be affected by stream pollution, including siltation and pesticide runoff from agricultural practices. Tree cover is also important to this species, and as such, forestry operations such as logging, may prove detrimental to some populations.

CONSERVATION ACTION: Basic monitoring of local populations is needed within the District of Columbia.

SITE MAPS: 3, 10

REFERENCES: 1 – 6



District of Columbia

Amphibian Fact Sheet

Species of Greatest Conservation Need



Fowlers Toad *Bufo fowleri*

STATUS: Data gap; more information forthcoming.

RANGE: Found throughout eastern North America, ranging from the Gulf Coast north to the Great Lakes.

LOCAL HABITAT: Data gap; more information forthcoming.

SPECIES ECOLOGY: Fowler's toads are most common in open sand prairie and panne habitats, although occasional individuals are taken within woods. It prefers open areas, especially in river and stream valleys with sandy soil. Breeding occurs late in the season, in late May and early June. Their diet consist of insects.

THREATS: Current threats are erosion from winter storms, habitat alteration by humans, and pollution caused by the

presence of herbicides and insecticides in runoff.

CONSERVATION ACTION: Data gap; more information forthcoming.

SITE MAPS: 2, 3, 5, 12

REFERENCES: 1 - 5



District of Columbia

Amphibian Fact Sheet

Species of Greatest Conservation Need



Marbled Salamander *Ambystoma opacum*

S

STATUS: The marbled salamander is represented by many and/or large occurrences throughout most of its range. Vulnerable within the District of Columbia.

RANGE: Occur from southern New England to northern Florida and west to southern Illinois, southeastern Oklahoma and eastern Texas.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The marbled salamander is an inhabitant of moist lowland forests where it can be found under logs, rocks, and leaf litter, as well as in tunnels dug by small mammals. They can also be found in drier habitats such as wooded ridges and rocky hillsides. In the fall it leaves the woods and migrates to a nearby pond, where it mates, and females lay eggs. A single

female lays a clutch of 30 to 100 eggs in a dry depression. The female will guard the eggs from predation. Marbled salamanders feed on worms and other invertebrates.

THREATS: Negatively impacted by habitat fragmentation, wetland drainage, channelization, and filling. Declining habitat and the effects of widespread temperature cooling. Thousands of local population have been eliminated by habitat loss.

CONSERVATION ACTION: Identification and conservation of sites found to have populations, especially locations where they are known to breed as well as identification of migration routes.

SITE MAPS: 3, 5, 12

REFERENCES: 1 - 6



District of Columbia

Amphibian Fact Sheet

Species of Greatest Conservation Need



Mud Salamander *Pseudotriton montanus*

STATUS: The mud salamander is represented by many and/or large occurrences throughout most of its range. Vulnerable within the District of Columbia.

RANGE: The mud salamander occurs in the southeastern United States, ranging from southern New Jersey to the Carolinas and northeastern Georgia.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Mud salamanders inhabit low elevation swamps, bogs, springs, and streams as well as clear, clean water. They seek shelter in burrows beneath leaf litter, logs, stones, or bark and may also excavate tunnels in creek banks. Courtship begins in early fall, spawning in December, and hatching in February. The clutch size is 66-192 and this species lays eggs every other year. The aquatic larvae feed on small aquatic invertebrates. Adults' diets are not

known, but it is speculated they eat small invertebrates, such as beetles, spiders, and mites.

THREATS: Mud salamanders are most vulnerable to alterations or destruction of their habitats, including springs, seeps, and creeks. They are also susceptible to toxins in the environment, including pesticides and herbicides and road run-off. Logging of surrounding forests, can have negative impacts, including increased siltation, evapo-transpiration, and cooling water temperatures.

CONSERVATION ACTION: Additional surveys are needed to determine distribution, habitat requirements, and its life cycle within the District. Sites should be acquired or protected, if species is located, to ensure water quality and monitoring needs are met.

SITE MAPS: 3, 10

REFERENCES: 1 - 5



District of Columbia

Amphibian Fact Sheet

Species of Greatest Conservation Need



Northern Cricket Frog *Acris crepitans*

STATUS: Widespread in eastern and central North America; it has declined in the northwestern part of its distribution, but remains stable and common in most of its range. Vulnerable in the District of Columbia.

RANGE: Found widespread in the eastern and central United States, from western Texas north to South Dakota and from the Florida panhandle north to southeastern New York, from Virginia to Florida and the northern Appalachians.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Northern cricket frogs inhabit sunny, shallow ponds with abundant vegetation in the water or on the shores. Slow moving, algae-filled water with sunny banks are the preferred habitat. Breeding occurs from June to July. A single female may lay several

dozen filmy egg masses on aquatic vegetation, each containing 5-10 eggs. They eat small insects.

THREATS: Loss of wetlands to development (dredging and drainage of marshes) is the major factor affecting populations as well as pollutants such as pesticides and fertilizers. Natural predators contributing to the species decline include birds, reptiles, bullfrogs and fish.

CONSERVATION ACTION: Surveys are needed locate local habitats and identify biological and/or ecological factors affecting this species. Additional monitoring is needed to measure suitable required habitat and the role of dispersal in maintaining satellite populations of this species.

SITE MAP: 3

REFERENCES: 1 - 5



District of Columbia

Amphibian Fact Sheet

Species of Greatest Conservation Need

Northern Two-lined Salamander *Eurycea bislineata*



STATUS: The northern two-lined salamander is represented by many and/or large occurrences throughout most of its range. Secure within the District of Columbia.

RANGE: Its north/south range, stretches from the mouth of St. Lawrence River in Quebec, to northern Florida, and the east/west range stretches from Quebec, down through southeastern Ontario, to eastern Illinois and the Mississippi River.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Northern two-lined salamanders inhabit rock-bottomed brooks, springs, seepages, river swamps, and floodplain bottoms in the coastal plains to damp forest floors at high elevations. A dozen to 100 eggs are laid on undersides of submerged rocks, logs, or aquatic plants; females may guard the eggs. They eat larvae and forage on the

bottom of streams for small aquatic invertebrates, such as insect larvae.

THREATS: Development worldwide is causing population declines. Habitat loss, acid rain and environmental contaminants, ultraviolet radiation, and invasive species directly affect salamanders and other amphibian populations.

CONSERVATION ACTION: Additional surveys are needed to determine distribution, habitat requirements, and its life cycle within the District. Sites should be acquired or protected, if species is located, to ensure water quality and monitoring needs are met.

SITE MAP: 3

REFERENCES: 1 – 6



District of Columbia

Amphibian Fact Sheet

Pickerel Frog *Rana palustris*



STATUS: The pickerel frog is represented by many and/or large occurrences throughout most of its range. Secure within the District of Columbia.

RANGE: It can be found from the Canadian Maritime Provinces south to the Carolinas and then west to southeast Minnesota and eastern Texas.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Pickerel frogs commonly inhabit cool, wooded streams, seeps and springs although they are also found in many other habitats. In the South, it can also be found in the relatively warm, turbid waters of the Coastal Plain and floodplain swamps. Breeding takes place April through mid-June. Females can lay thousands of eggs in submerged masses.

Pickerel frogs consume insects, earthworms, and other invertebrates.

THREATS: Fishermen often use this species as bait. While all frogs are affected by pollution, the medium-sized Pickerel Frog is particularly sensitive to it. They need relatively unspoiled habitat with cool, clear water. Human activities have reduced necessary habitat.

CONSERVATION ACTION: Additional surveys are needed to determine distribution, habitat requirements, and its life cycle within the District. Sites should be acquired or protected, if species is located, to ensure water quality and monitoring needs are met.

SITE MAPS: 3, 2, 12

REFERENCES: 1 - 7



District of Columbia

Amphibian Fact Sheet

Species of Greatest Conservation Need



Northern Red Salamander *Pseudotriton ruber ruber*

STATUS: The northern red salamander is represented by many and/or large occurrences throughout most of its range. Vulnerable within the District of Columbia.

RANGE: Found in North America east of the Mississippi.

LOCAL HABITAT: Further monitoring is needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Northern red salamanders live in and about clear, cold springs and small streams of wooded ravines, swamps, open fields, and meadows. They hide under moss, stones, or logs near springs and brooks. Courtship is in the summer, spawning in October and hatching in early December. The average clutch is 70 eggs. Egg-laying may be initiated by falling

temperatures. Their diet consists of earthworms, snails, slugs, spiders, insects, and smaller salamanders.

THREATS: The Northern Red Salamander requires deciduous forests with clean siltless streams in order to thrive and reproduce. Deforestation, acid drainage from coal mining operations, stream siltation, and other forms of pollution has led to population decreases in this species.

CONSERVATION ACTION: Additional surveys are needed to determine distribution, habitat requirements, and local life cycle. Sites should be acquired or protected, if species is located, to ensure water quality and monitoring needs are met.

SITE MAPS: 3, 10

REFERENCES: 1 - 5



District of Columbia

Amphibian Fact Sheet

Species of Greatest Conservation Need



Redback Salamander *Plethodon cinereus*

STATUS: The redback salamander is represented by many and/or large occurrences throughout most of its range. Secure within the District of Columbia.

RANGE: Found from southern Quebec south through North Carolina, north through Ohio and Indiana and on to northern Wisconsin and Minnesota and the Lake Superior basin.

LOCAL HABITAT: Further monitoring is needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Redback salamanders live in all sorts of moist forests and often invade suburban backyards. They are found in and under rotting logs, stones, bark, and other debris. They breed on land and the female lays 3-14 eggs in damp soil under logs or inside the rotten logs themselves. She guards the eggs until they hatch and stays with the young up to three weeks thereafter. There is no aquatic developmental stage. They eat worms,

ants, spiders, and a variety of small invertebrates.

THREATS: In some areas of its range, the redback salamander may outnumber many other animals in woodland habitats. Despite their common status, they are not found in acidic soil, and are affected by intensive timber harvesting practices such as clear-cutting.

CONSERVATION ACTION: Additional surveys are needed to determine distribution, habitat requirements, and local life cycle. Sites should be acquired or protected, if species is located, to ensure water quality and monitoring needs are met.

SITE MAP: 3

REFERENCES: 1 – 4



District of Columbia

Amphibian Fact Sheet

Species of Greatest Conservation Need



Red Spotted Newt *Notophthalmus viridescens*

STATUS: The red spotted newt is represented by many and/or large occurrences throughout most of its range. Vulnerable within the District of Columbia.

RANGE: Found throughout most of the eastern United States.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The red spotted newt lives in permanent or semi-permanent bodies of water edged by undisturbed woodlands. They can be found in a variety of habitats such as marshes, back waters of streams, vernal pools, and even permanent ponds and lakes. They reproduce in the spring through early summer. Females deposit 300-400 eggs one at a time, attaching them to submerged vegetation. Depending on water temperature, the eggs may take several weeks to hatch. The aquatic larvae remain in the pond

until late summer. Young newts (efts) feed on worms, insects, small crustaceans, amphibian eggs and larva, while adults eat amphibian eggs and frogs.

THREATS: Forestry operations in wooded upland areas can destroy necessary habitat for eft, as well as for adults, which must migrate onto land. Drainage and conversion of wetlands is also disastrous for all stages of the Red-spotted newt.

CONSERVATION ACTION: Additional surveys are needed to determine distribution, habitat requirements, and local life cycle. Sites should be acquired or protected, if species is located, to ensure water quality and monitoring needs are met.

SITE MAP: 3

REFERENCES: 1 - 5



District of Columbia

Amphibian Fact Sheet



Northern Spring Peeper *Pseudacris crucifer*

STATUS: The northern spring peeper is represented by many and/or large occurrences throughout most of its range. Apparently secure within the District of Columbia.

RANGE: Found in Quebec, Ontario, throughout New England south to eastern Texas, and throughout the eastern United States except Florida and southern Georgia.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Spring peepers inhabit marshy woods, non-wooded lowlands, ponds, and swamps. Although a good climber, spring peepers seem to prefer to be on the ground or hiding in leaf litter. They breed in permanent or temporary freshwater, pools are a habitat requirement. The breeding period lasts

from March to June, when 800 to 1000 eggs are laid in shallow ponds. They are insectivorous, eating mainly small insects including ants, beetles, flies, and spiders.

THREATS: This is an abundant frog throughout its range. It is under no threats at present. Preventative maintenance includes protecting wetlands and streams from degradation.

CONSERVATION ACTION: Additional surveys are needed to determine distribution, habitat requirements, and local life cycle. Sites should be acquired or protected, if species is located, to ensure water quality and monitoring needs are met.

SITE MAPS: 2, 3, 5, 10, 12

REFERENCES: 1 - 4



District of Columbia

Amphibian Fact Sheet

Species of Greatest Conservation Need



Upland Chorus Frog *Pseudacris feriarum feriarum*

STATUS: The upland chorus frog is represented by many and/or large occurrences throughout most of its range. Vulnerable within the District of Columbia.

RANGE: In North America, it is found from northern New Jersey to the Florida panhandle, west to east Texas and southeast Oklahoma.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The upland chorus frog inhabits moist woodlands or areas around swamps, bogs, marshes, and ponds. They usually are found in temporary pools in grasslands, roadside ditches, wetlands and forests. Breeding activity takes place around late February to early March. Females deposit up to 1,000 eggs, attached in masses of 40 to 60 eggs to vegetation in the water. Their diet consists of small arthropods.

THREATS: Even though secure on a global scale, this frog, like other

amphibian species within the District, is not showing increasing populations, and is restricted to fairly small habitat areas.

CONSERVATION ACTION: Additional surveys are needed to determine distribution, habitat requirements, and local life cycle. Sites should be acquired or protected, if species is located, to ensure water quality and monitoring needs are met.

SITE MAP: 3

REFERENCES: 1 - 8



District of Columbia

Amphibian Fact Sheet

Species of Greatest Conservation Need



Spotted Salamander *Ambystoma maculatum*

STATUS: The spotted salamander is represented by many and/or large occurrences throughout most of its range. Apparently secure within the District of Columbia.

RANGE: Found from Ontario east to Nova Scotia and south to Georgia and Texas.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: Spotted Salamanders prefer deciduous forests in close proximity to vernal ponds, they will also inhabit coniferous and mixed forests. They spend most of their time in the burrows of small mammals or under rocks, decaying logs, or in wet leaf litter. They breed from March to April in the northern part of its range, from January to February in the Great Smokies and from December to February in South. Ponds or vernal pools are very important for breeding. Fish free ponds are best. The female lays one or more compact

egg masses covered with a jelly-like substance. Each egg mass contains about 100 eggs. Adults feed primarily on invertebrates such as earthworms, insects, and mollusks. Aquatic larvae generally eat small animals such as zooplankton and insect larvae that live in the same pond, but sometimes salamander larvae are cannibals, and they eat other salamanders.

THREATS: The Spotted Salamander has been collected for both the biological supply and pet trade industries in the past. Other noted reasons for declines in populations include habitat destruction and low, or acidic, pH levels in breeding ponds.

CONSERVATION ACTION: Measures include protection of vernal pools and adjacent wooded areas. Minimizing forest fragmentation would also benefit the species. Additional surveys are needed.

SITE MAPS: 2, 3, 5, 12

REFERENCES: 1 - 5



District of Columbia

Amphibian Fact Sheet



Wood Frog *Rana sylvatica*

STATUS: The overall population trend of this species is unknown but probably stable to slightly declining. Imperiled within the District of Columbia.

RANGE: Found from northern Georgia and in isolated colonies in the central highlands in the eastern to central parts of Alabama, up through the northeastern United States, and across Canada into Alaska.

LOCAL HABITAT: Further monitoring needed to determine current range within the District of Columbia.

SPECIES ECOLOGY: The wood frog can be found in a variety of habitats such as moist woodlands in eastern areas; open grasslands in western areas; and in far northern tundra. Breeding takes place in early spring, before ice has completely melted from water. Egg masses are attached to submerged vegetation. They eat beetles, flies,

caterpillars, and other insects; and also spiders, other arthropods; and slugs, snails, and worms.

THREATS: Loss of habitat to agriculture and suburban development has put them on the list of "species of special concern" in some areas.

CONSERVATION ACTION: Additional surveys are needed to determine distribution, habitat requirements, and local life cycle. Sites should be acquired or protected, if species is located, to ensure water quality and monitoring needs are met.

SITE MAPS: 3, 2, 12

REFERENCES: 1-5



District of Columbia

Fish Fact Sheet

Species of Greatest Conservation Need

American Shad *Alosa sapidissima*



STATUS: Population abundance is severely reduced from historic levels, but is rebounding.

RANGE: From Newfoundland and Gulf of St. Lawrence to South Carolina, with a natural landlocked population in New York.

LOCAL HABITAT: Potomac River, Anacostia River, Rock Creek..

SPECIES ECOLOGY: American Shad are offshore anadromous fish of the eastern Atlantic Ocean. They ascend to coastal rivers during spawning season. Hatched larvae are found in rivers during the summer; by autumn they enter the sea and remain there until maturity. They feed on plankton, mainly copepods and mysids, occasionally on small fishes.

THREATS: Overfishing; habitat destruction; lack of quality spawning and nursery habitat.

CONSERVATION ACTION: Stock enhancement; cooperation with the Atlantic States Marine Fisheries Commission on stock management. Enhanced monitoring.

SITE MAPS: 1, 11

REFERENCES: 1-3



District of Columbia

Fish Fact Sheet

Greenside Darter *Etheostoma blennioides*



STATUS: Extremely low population abundance; current population trend unknown.

RANGE: Found throughout most of the eastern United States from the Ozark Mountains in Arkansas to New York State.

LOCAL HABITAT: Rock Creek.

SPECIES ECOLOGY: Greenside darters need clear, rocky streams and rivers with riffles, runs, and usually vegetation. Spawning occurs late March to early May. A single female produces between 404-1,832 eggs. Greenside darters consume insects and snails.

THREATS: Especially sensitive to temperature and particularly intolerant to warm water temperatures. Other threats include anthropogenic changes in rivers and pollution from pesticides, industrial, agricultural and urban waste. Lack of suitable, quality habitat.

CONSERVATION ACTION: Stream restoration and water quality improvement. Enhanced monitoring.

SITE MAP: 1

REFERENCES: 1-4



District of Columbia

Fish Fact Sheet

Silverjaw Minnow *Ericymba buccata*



STATUS: Low population abundance; current population trend unknown.

RANGE: Occurs within much of the eastern United States and within the mid-Atlantic region in western and northern Virginia and in mainland Maryland (but not its eastern portion).

LOCAL HABITAT: Potomac River.

SPECIES ECOLOGY: The silverjaw minnow inhabits shallow sandy riffles and raceways of creeks and small to medium rivers. They prefer the riffles of small to medium rivers. The silverjaw minnow spawns in March through June with peak period in April. They school while spawning. Their diet includes cladocerans, copepods, and ostracods and midge larvae (chironomids) at night.

THREATS: Lack of suitable, quality habitat.

CONSERVATION ACTION: Stream restoration and water quality improvement. Enhanced monitoring.

SITE MAP: 1

REFERENCES: 1-3

Species of Greatest Conservation Need



District of Columbia

Fish Fact Sheet

Warmouth *Lepomis gulosus*



STATUS: Low population abundance; current population trend unknown.

RANGE: From Maryland, southern Michigan, and southern Wisconsin south to Florida, west to Texas and New Mexico.

LOCAL HABITAT: Potomac River.

SPECIES ECOLOGY: Warmouths inhabit pools and low gradient creeks, streams, rivers, and lakes with extensive submerged vegetation and a mud or detritus bottom. Spawning occurs mid-spring through summer. Males build the protects the nest. It feeds on small fishes, crayfishes, and aquatic insects.

THREATS: Lack of submerged aquatic vegetation (SAV) due to siltation; lack of suitable, quality habitat.

CONSERVATION ACTION: SAV enhancement and water quality improvement. Enhanced monitoring.

SITE MAPS: 1, 7, 11

REFERENCES: 1-3



District of Columbia

Fish Fact Sheet

Species of Greatest Conservation Need

Alewife

Alosa pseudoharengus



STATUS: Low population abundance; current population appears stable.

Marine Fisheries Commission on stock management. Enhanced monitoring.

RANGE: Newfoundland and Gulf of St. Lawrence to South Carolina. There is a natural landlocked population in New York.

SITE MAPS: 1, 11

REFERENCES: 1-4

LOCAL HABITAT: Potomac River, Anacostia River, Rock Creek..

SPECIES ECOLOGY: Alewives are "anadromous" fish that, much like salmon and shad, mature in salt water but spawn in fresh water. They form schools in large numbers in the spring. Found in rivers, estuaries and coastal waters. They feed on diatoms, copepods, insects, and fish eggs.

THREATS: Lack of suitable, quality spawning and juvenile habitat.

CONSERVATION ACTION: Fish passage barrier removal and mitigation. Stream restoration and water quality improvement. Stock enhancement; cooperation with the Atlantic States



District of Columbia

Fish Fact Sheet

Species of Greatest Conservation Need



Blueback Herring *Alosa aestivalis*

STATUS: Low population abundance; current population appears stable.

RANGE: Newfoundland and Gulf of St. Lawrence to South Carolina. There is a natural landlocked population in New York.

LOCAL HABITAT: Potomac River, Anacostia River, and Rock Creek.

SPECIES ECOLOGY: Blueback herring are offshore anadromous fish of the eastern Atlantic Ocean; it ascends to coastal rivers during spawning season. It usually spawns later in the spring than the alewife, when water temperatures are a bit warmer. Spent fish move back to the sea after spawning. Young fish usually move to sea when about 1 month old and 1 1/2 to 2 inches long. They feed on plankton, various small floating animals, small fish fry, and fish eggs.

THREATS: Lack of suitable, quality spawning and juvenile habitat.

CONSERVATION ACTION: Fish passage barrier removal and mitigation. Stream restoration and water quality improvement. Stock enhancement; cooperation with the Atlantic States Marine Fisheries Commission on stock management. Enhanced monitoring.

SITE MAPS: 1, 11

REFERENCES: 1-3



District of Columbia

Fish Fact Sheet

Atlantic Sturgeon *Acipenser oxyrinchus*



STATUS: Federal Status – Threatened.
Extirpated from the District of Columbia.

RANGE: Occurs along the Atlantic coast and in estuaries from Labrador to Florida and west to the Mississippi delta.

LOCAL HABITAT: Potomac River.

SPECIES ECOLOGY: Atlantic sturgeons are anadromous fish. They spend most of their life in brackish or salt water and migrate into freshwater to spawn. Atlantic sturgeons are found in rivers and oceanic waters. They are bottom dwellers and prefer deep waters and soft substrate. Their diet consists of worms, snails, shellfish, crustaceans, and small fish, as well as large amounts of mud and debris.

THREATS: Lack of suitable, quality spawning habitat.

CONSERVATION NEED: Stock enhancement; cooperation with the Atlantic States Marine Fisheries Commission on stock management.

SITE MAP: 1

REFERENCES: 1-4



District of Columbia

Fish Fact Sheet

American Eel *Anguilla rostrata*



STATUS: Low population abundance; current population trend unknown.

RANGE: Fresh and coastal waters throughout eastern North America to northern South America, including the Caribbean.

LOCAL HABITAT: Potomac River, Anacostia River, Rock Creek.

SPECIES ECOLOGY: American eels occupy inshore waters, estuaries, rivers, creeks, lakes, and ponds. They prefer areas with soft bottom such as mud or sand and vegetation or other shelter in which they can hide. They are catadromous fish that spend the majority of their life in fresh and brackish water, but spawn in marine waters, specifically the Sargasso Sea. Their diet includes insects, snails, small fish, clams, and crabs.

THREATS: Overharvest of adults and juveniles worldwide; lack of quality habitat.

CONSERVATION ACTION: Fish passage barrier removal and mitigation. Stream restoration and water quality improvement. Enhanced monitoring.

SITE MAPS: 1, 7, 9, 11

REFERENCES: 1-3

Species of Greatest Conservation Need



District of Columbia

Fish Fact Sheet

Species of Greatest Conservation Need

Central Stoneroller *Campostoma anomalum*



STATUS: Low population abundance; current population trend unknown.

RANGE: Widely distributed through central and eastern streams of the United States and also widespread in the southern Great Lakes and upper and middle Mississippi basins, the western Gulf slope and the central Atlantic slope.

LOCAL HABITAT: Rock Creek.

SPECIES ECOLOGY: The central stoneroller is found in rocky riffles, runs and pools of streams with clear cool water. Spawning typically occurs April to May with each female laying 150-4,800 eggs. Its diet includes algae and detritus.

THREATS: Lack of suitable, quality habitat.

CONSERVATION ACTION: Stream restoration and water quality improvement. Enhanced monitoring.

SITE MAP: 1

REFERENCES: 1-4



District of Columbia

Fish Fact Sheet

Species of Greatest Conservation Need



Bowfin
Amia calva

STATUS: Extremely low population abundance; current population trend unknown.

RANGE: Found throughout most of the eastern half of the United States and in southeastern Canada.

LOCAL HABITAT: Potomac River.

SPECIES ECOLOGY: Bowfins prefer dense vegetation and clear water in a variety of swampy habitats such as ditches, channels, borrow pits, pools and sluggish creeks and rivers. Spawning generally occurs during the spring. Males prepare a nesting area and one or more females lay eggs at night. The male bowfin guards the eggs and protects the young. A voracious and opportunist feeder, it subsists on fishes including other sport fishes, frogs, crayfish, insects, and shrimps.

THREATS: Lack of submerged aquatic vegetation (SAV) due to siltation; lack of suitable, quality habitat.

CONSERVATION ACTION: Stream restoration and water quality improvement. Enhanced monitoring.

SITE MAPS: 1, 11

REFERENCES: 1-4



District of Columbia

Fish Fact Sheet

Hickory Shad *Alosa mediocris*



STATUS: Population abundance is severely reduced from historic levels, but is rebounding.

RANGE: From Maine to northeast Florida.

LOCAL HABITAT: Potomac River, Anacostia River, and Rock Creek.

SPECIES ECOLOGY: Hickory shad are anadromous and spend the majority of their life at sea and only enter fresh water in the spring to spawn. They spawn in rivers and tributaries along the coast. Their diet includes anchovy, silverside, insects and small pelagic crustaceans.

THREATS: Overharvest; habitat destruction; lack of quality spawning and nursery habitat.

CONSERVATION ACTION: Stock enhancement; cooperation with the Atlantic States Marine Fisheries Commission on stock management. Enhanced monitoring.

SITE MAPS: 1, 11

REFERENCES: 1-3

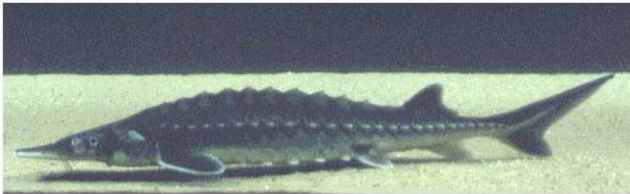
Species of Greatest Conservation Need



District of Columbia

Fish Fact Sheet

Shortnose Sturgeon *Acipenser brevirostrum*



STATUS: Federal Status - Endangered

RANGE: Can be found in coastal rivers from the Saint John River in Canada to the St. Johns River in Florida.

LOCAL HABITAT: Potomac River.

SPECIES ECOLOGY: The shortnose sturgeon is an anadromous bony fish that spends much of its life in slow-moving tidal rivers or in near-shore marine waters, then returns upstream to fresh waters to spawn. They consume mostly benthic organisms such as aquatic worms and insects or crustaceans.

THREATS: Overfishing, pollution, and damming have decimated indigenous populations of the fish.

CONSERVATION ACTION: Stock enhancement; cooperation with the Atlantic States Marine Fisheries Commission on stock management.

SITE MAP: 1

REFERENCES: 1-4



District of Columbia

Invertebrate Fact Sheet

Class Maxillopoda Copepods

1. *Acanthocyclops columbiensis*
2. *Acanthocyclops villosipes*
3. *Attheyella (Canthocamptus) illinoisensis*
4. *Attheyella (Mrazekiella) illinoisensis*
5. *Attheyella (Mrazekiella) obatogamensis*
6. *Bryocamptus hutchinsoni*
7. *Bryocamptus minutus*
8. *Bryocamptus nivalis*
9. *Bryocamptus zchokkei*
10. *Diacyclops harryi*
11. *Diacyclops nearcticus*
12. *Eucyclops agilis*
13. *Macrocyclus albidus*
14. *Fimbriatus chiltoni*
15. Spiny-foot copepod

STATUS: Data gaps; more information forthcoming.

RANGE: Data gaps; more information forthcoming.

LOCAL HABITAT: Data gaps; more information forthcoming.

SPECIES ECOLOGY: Data gaps; more information forthcoming.

THREATS: Data gaps; more information forthcoming.

CONSERVATION ACTION: Data gap; more information forthcoming.

REFERENCES: Data gaps; more information forthcoming.

Species of Greatest Conservation Need



District of Columbia

Invertebrate Fact Sheet

Class Malacostraca Amphipods

1. Alewife floater (*Anodonta implicata*)
2. Brook floater (*Alasmidonta varicose*)
3. Dwarf wedgemussel (*Alasmidonta heterodon*)
4. Eastern pondmussel (*Ligumia nausta*)
5. Green floater (*Lasmigona subviridus*)
6. Tidewater mucket (*Leptodea ochracea*)
7. Triangle floater (*Alasmidonta undulate*)
8. Yellow lampmussel (*Lampsilis cariosa*)

STATUS: Data gaps; more information forthcoming.

RANGE: Data gaps; more information forthcoming.

LOCAL HABITAT: Data gaps; more information forthcoming.

SPECIES ECOLOGY: Data gaps; more information forthcoming.

THREATS: Data gap; more information forthcoming.

CONSERVATION ACTION: Data gaps; more information forthcoming.

REFERENCES: Data gaps; more information forthcoming.

Species of Greatest Conservation Need



District of Columbia

Invertebrate Fact Sheet

Class Bivalva Bivalves and Clams

1. Hay's Spring Amphipod (*Stygobromus hayi*)
2. Kenk's Amphipod (*Stygobromus kenki*)
3. Pizzini's Cave Amphipod (*Stygobromus pizzinii*)
4. Potomac Groundwater Amphipod (*Stygobromus tenuis potomacus*)
5. Rock Creek Amphipod

STATUS: Data gaps; more information forthcoming.

RANGE: Data gaps; more information forthcoming.

LOCAL HABITAT: Data gaps; more information forthcoming.

SPECIES ECOLOGY: Data gaps; more information forthcoming.

THREATS: Data gaps; more information forthcoming.

CONSERVATION ACTION: Data gap; more information forthcoming.

REFERENCES: Data gaps; more information forthcoming.

Species of Greatest Conservation Need



District of Columbia

Invertebrate Fact Sheet

Class Gastropoda Snails

1. Appalachian Spring Snail (*Fontigens bottimeri*)

STATUS: Data gaps; more information forthcoming.

RANGE: Data gaps; more information forthcoming.

LOCAL HABITAT: Data gaps; more information forthcoming.

SPECIES ECOLOGY: Data gaps; more information forthcoming.

THREATS: Data gaps; more information forthcoming.

CONSERVATION ACTION: Data gaps; more information forthcoming.

REFERENCES: Data gaps; more information forthcoming.



District of Columbia

Invertebrate Fact Sheet

Species of Greatest Conservation Need

Class Insecta Butterflies

1. Appalachian grizzled skipper
(*Pyrgus wyandot*)
2. Crossline skipper
(*Polites origenes*)
3. Eastern comma
(*Polygonia comma*)
4. Edward's hairstreak
(*Satyrrium edwardsii*)
5. Frosted elfin
(*Callophyrus irus*)
6. Great spangled fritillary
(*Speyeria cybele*)
7. Grey petaltail
(*Tachopteryx thoreyi*)
8. Imported (White) Cabbage
(*Pieris rapae*)
9. Little glasswing
(*Pomperius verna*)
10. Monarch
(*Danaus plexippus*)
11. Mottled duskywing
(*Erynnis martialis*)
12. Question mark
(*Polygonia interrogationis*)
13. Red admiral
(*Vanessa atalanta*)
14. Regal fritillary
(*Speyeria idalia*)
15. Variegated fritillary
(*Euptoieta claudia*)

STATUS: Data gaps; more information forthcoming.

CONSERVATION ACTION: Data gaps; more information forthcoming.

RANGE: Data gaps; more information forthcoming.

REFERENCES: Data gaps; more information forthcoming.

LOCAL HABITAT: Data gaps; more information forthcoming.

SPECIES ECOLOGY: Data gaps; more information forthcoming.

THREATS: Data gaps; more information forthcoming.



District of Columbia

Invertebrate Fact Sheet

Species of Greatest Conservation Need

Class Insecta Dragonflies and Damselflies

1. Emerald spreadwing (*Lestes dryas*)
2. Fine-lined emerald (*Samatochlora filosa*)
3. Lilypad forktail damselfly (*Ischnura kellicotti willamsonii*)
4. Mocha emerald dragonfly (*Samatochlora linearis*)
5. Sedge sprite (*Nehalennia irene*)
6. Sphagnum sprite (*Nehalennia gracilis*)
7. Tiger spiketail (*Cordulegaster erronea*)
8. Unicorn clubtail dragonfly (*Arigomphus villosipes*)

STATUS: Data gaps; more information forthcoming.

RANGE: Data gaps; more information forthcoming.

LOCAL HABITAT: Data gaps; more information forthcoming.

SPECIES ECOLOGY: Data gaps; more information forthcoming.

THREATS: Data gaps; more information forthcoming.

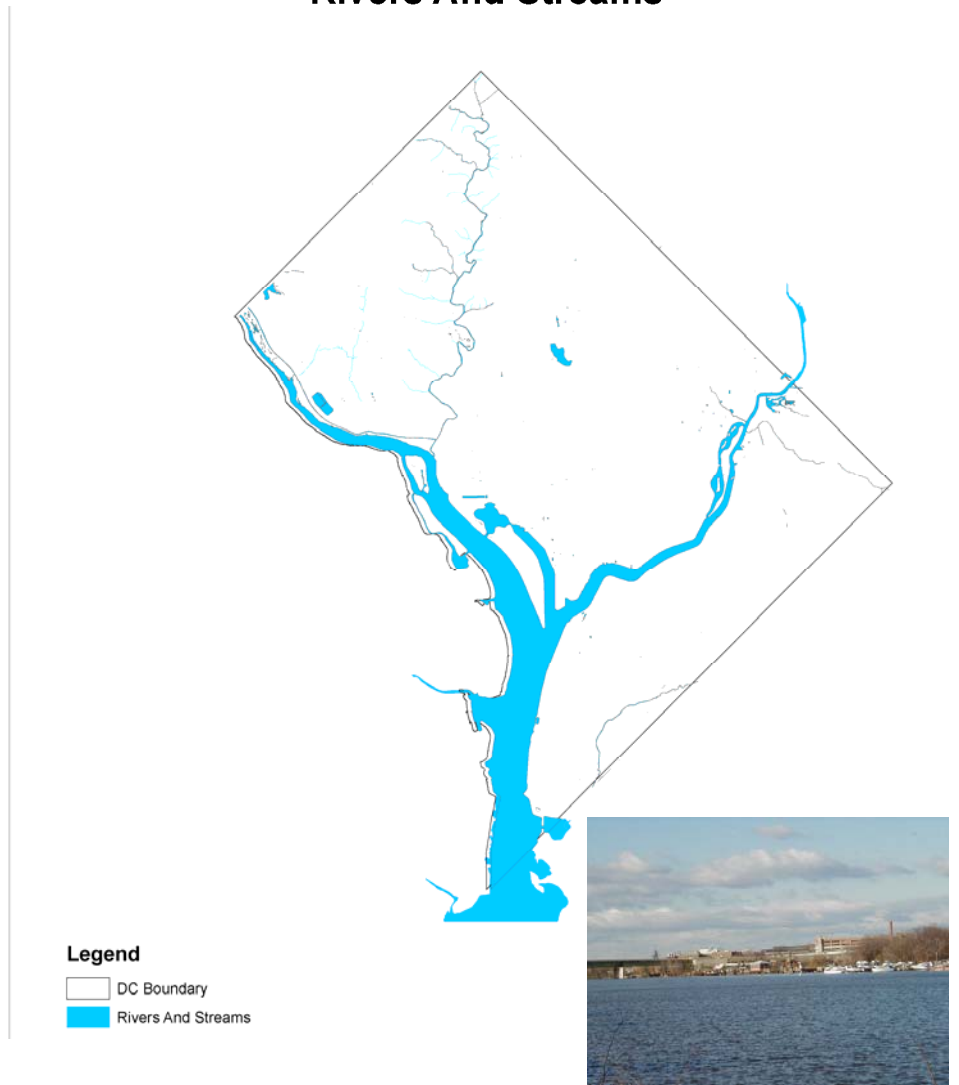
CONSERVATION ACTION: Data gaps; more information forthcoming.

REFERENCES: Data gaps; more information forthcoming

DISTRICT OF COLUMBIA

CWCS Habitat Map #1

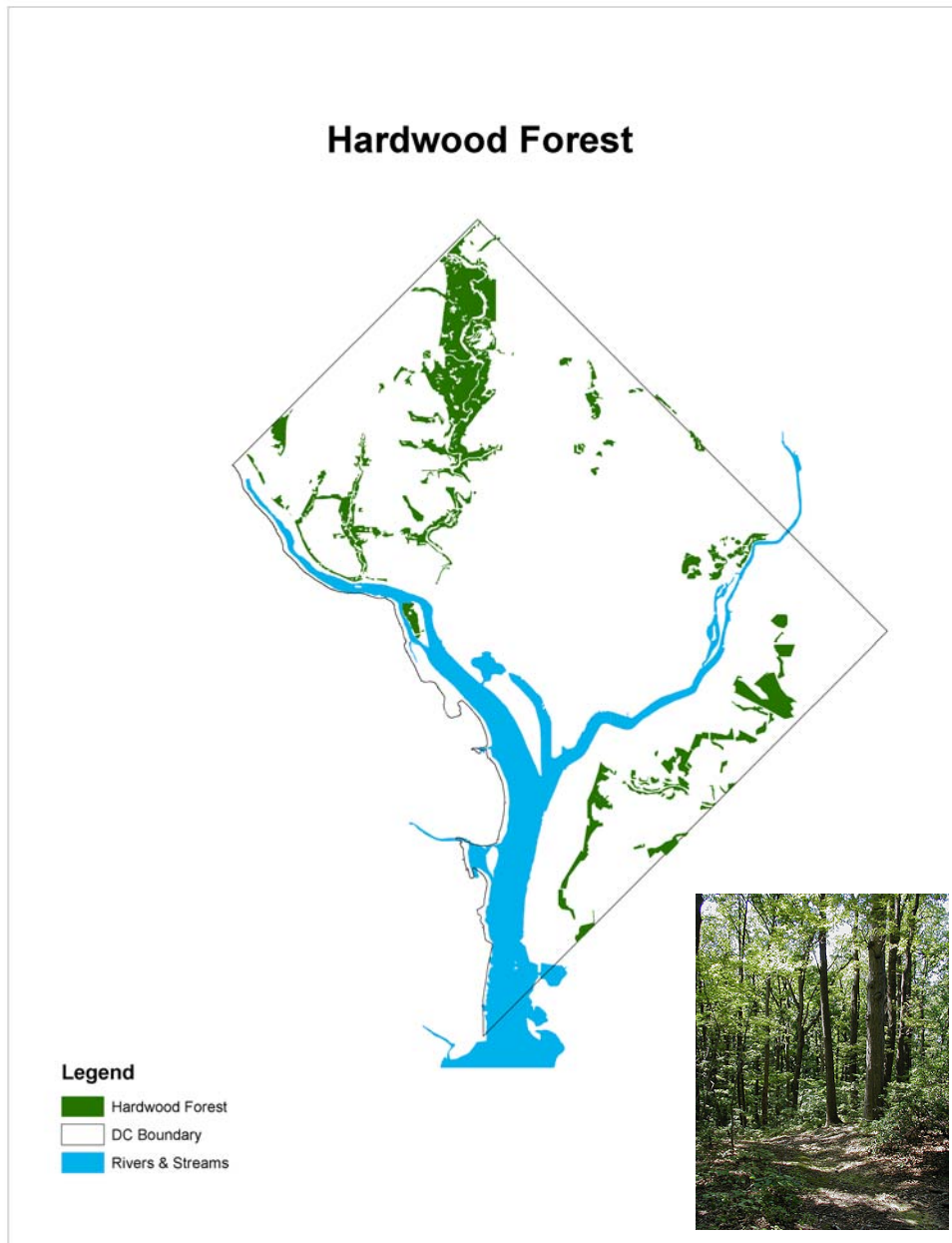
Rivers And Streams



Rivers and streams provide habitat for many of the District's species of greatest conservation need. Almost all wildlife taxa utilize the rivers and streams in some form. Fish species live in these habitats, while birds and mammals feed at them. Rivers and streams also connect the neighboring states to the District's habitat. The conservation of river and stream habitat is critical because it carries sediment and pollution downstream. All life depends on water and the health of the District's rivers and streams affects all species of greatest conservation need.

DISTRICT OF COLUMBIA

CWCS Habitat Map #2

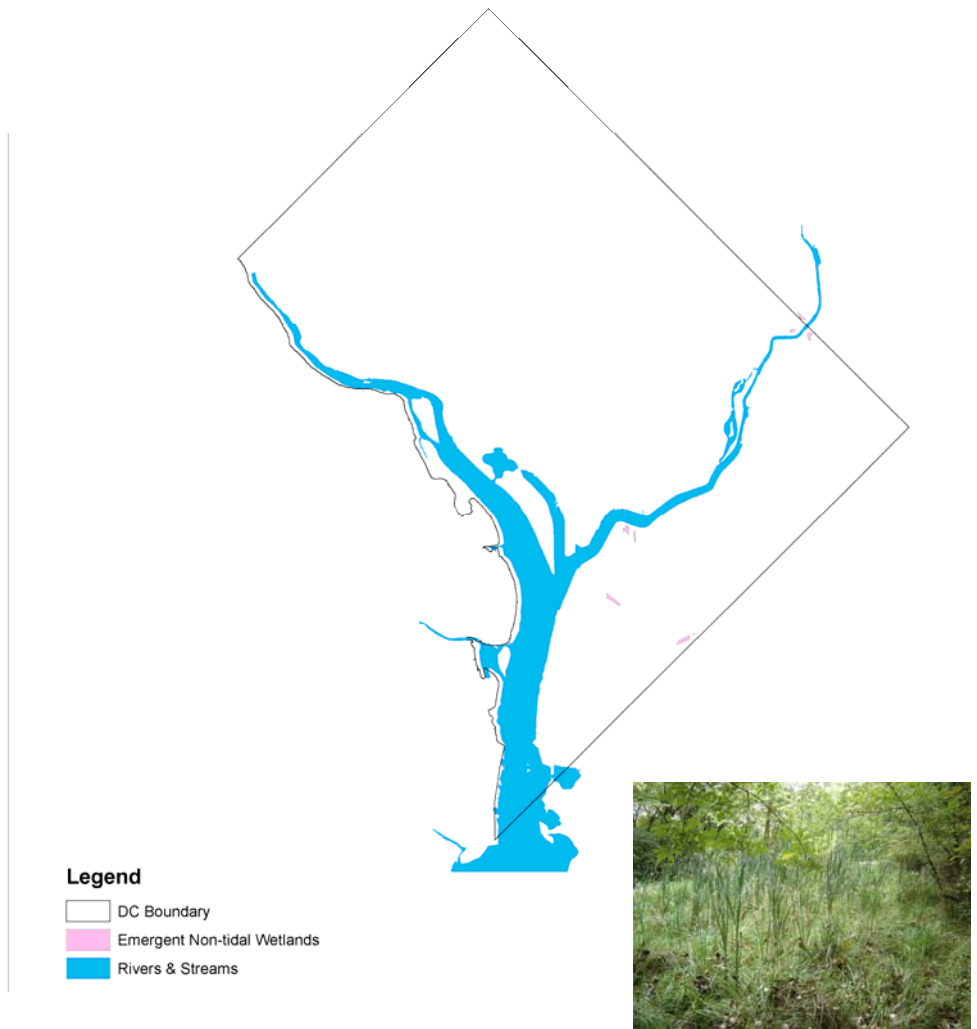


Hardwood forests are of priority conservation significance within the District of Columbia because of their complex composition and vegetation structure. For example, many species of breeding birds require this habitat type. The species composition of these forests exhibits elements of both the mid-Atlantic coastal Plain and the mid-Atlantic Piedmont ecoregions. Urbanization and browsing by White-tailed Deer have contributed to significant fragmentation and degradation of this critical forest habitat within the District.

DISTRICT OF COLUMBIA

CWCS Habitat Map #3

Emergent Non-tidal Wetlands

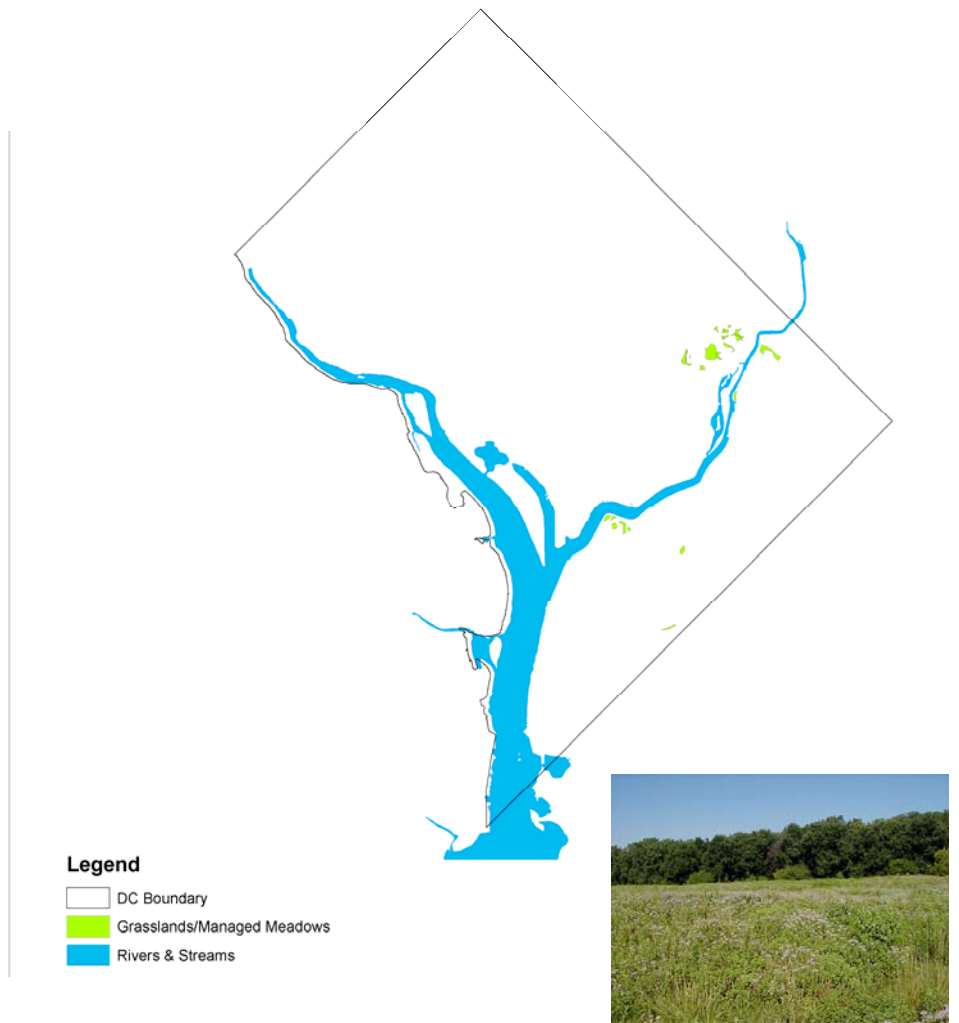


Emergent non-tidal wetlands are newly-formed wetlands that are not subject to tides. They include wet meadows and forb-dominated herbaceous areas in ponds, streams, and marshes. While this type of wetland does not support fish populations because it does not become inundated with water, it is habitat for invertebrate species that live in the substrate and the reptile, amphibian and the bird species that feed on those invertebrates.

DISTRICT OF COLUMBIA

CWCS Habitat Map #4

Grasslands/Managed Meadows

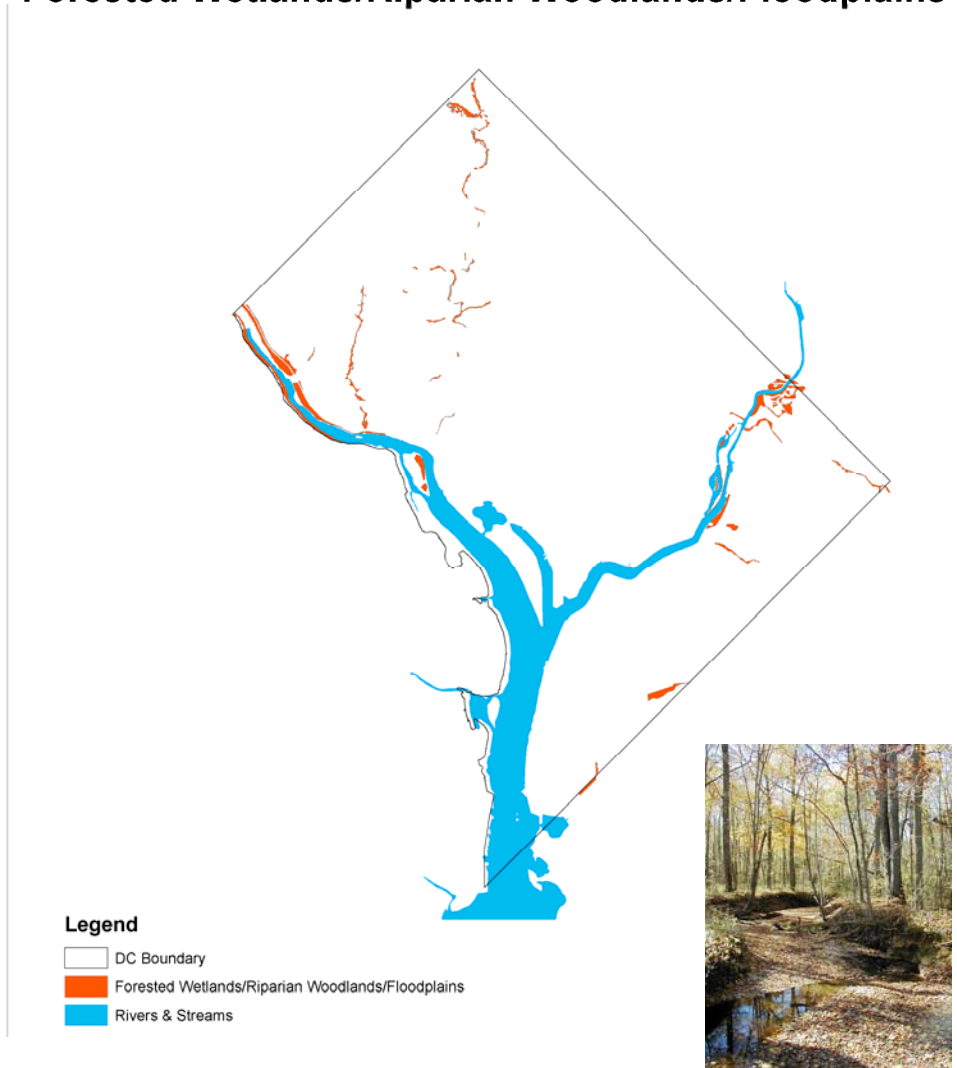


Grasslands are composed of vegetation that does not mature into successional growth or shrublands. They are primarily composed of grasses and can sometimes support scattered shrubs and trees. Species that rely on grasslands for breeding are among the species with the highest rates of population decline, such as the Bobolink (*Dolichonyx orizivorus*). Pervasive threats to grassland habitat come from secondary succession and their conversion to other human uses.

DISTRICT OF COLUMBIA

CWCS Habitat Map #5

Forested Wetlands/Riparian Woodlands/Floodplains

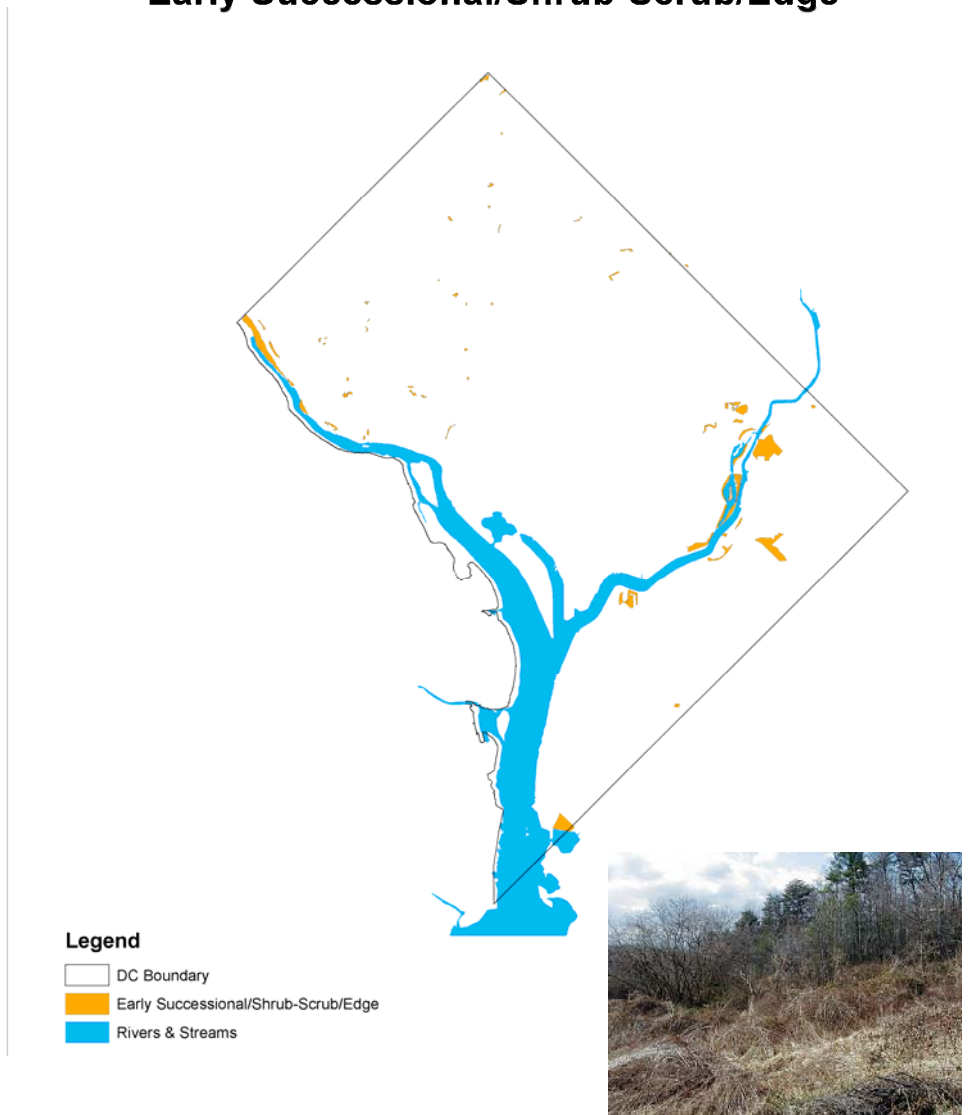


Forested wetlands are wetlands that support vegetation with roots that are adapted to saturation during the growing season. The boundaries of forested wetlands can be difficult to delineate because forests with short hydroperiods are very similar to upland hardwood forests. Nationwide, forested wetlands account for the greatest amount of wetland loss and are experiencing changes in plant composition. Forested wetlands are important to many species in greatest conservation need. For example, the Yellow-throated Vireo reaches its highest densities in forested wetlands of the coastal plain.

DISTRICT OF COLUMBIA

CWCS Habitat Map #6

Early Successional/Shrub-Scrub/Edge

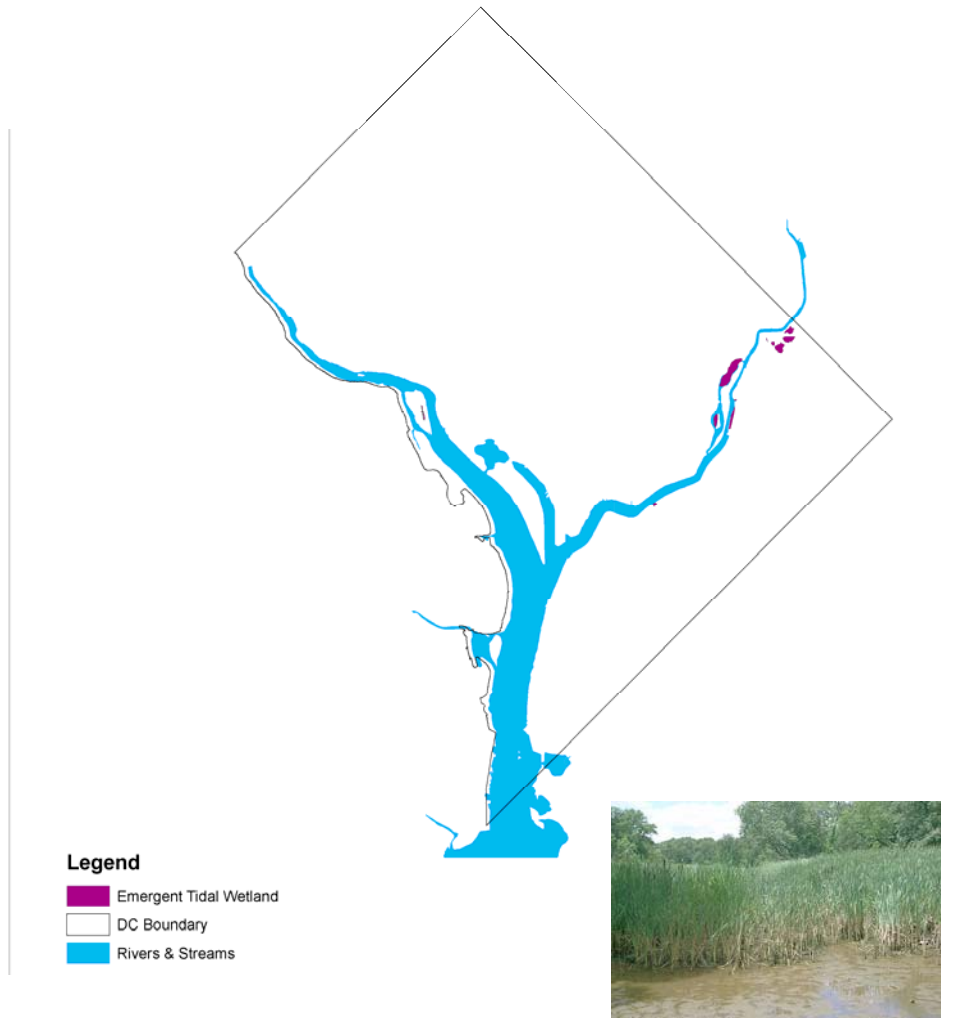


Early successional habitats are maintained by periodic natural or human disturbances that prevent the growth of mature woody vegetation. Some species depend on habitats that do not mature into hardwood forests. For example, the American Woodcock is a species of greatest conservation need that prefers moist early successional habitat scattered with alder, dogwood, crab apple and hawthorn.

DISTRICT OF COLUMBIA

CWCS Habitat Map #7

Emergent Tidal Wetlands

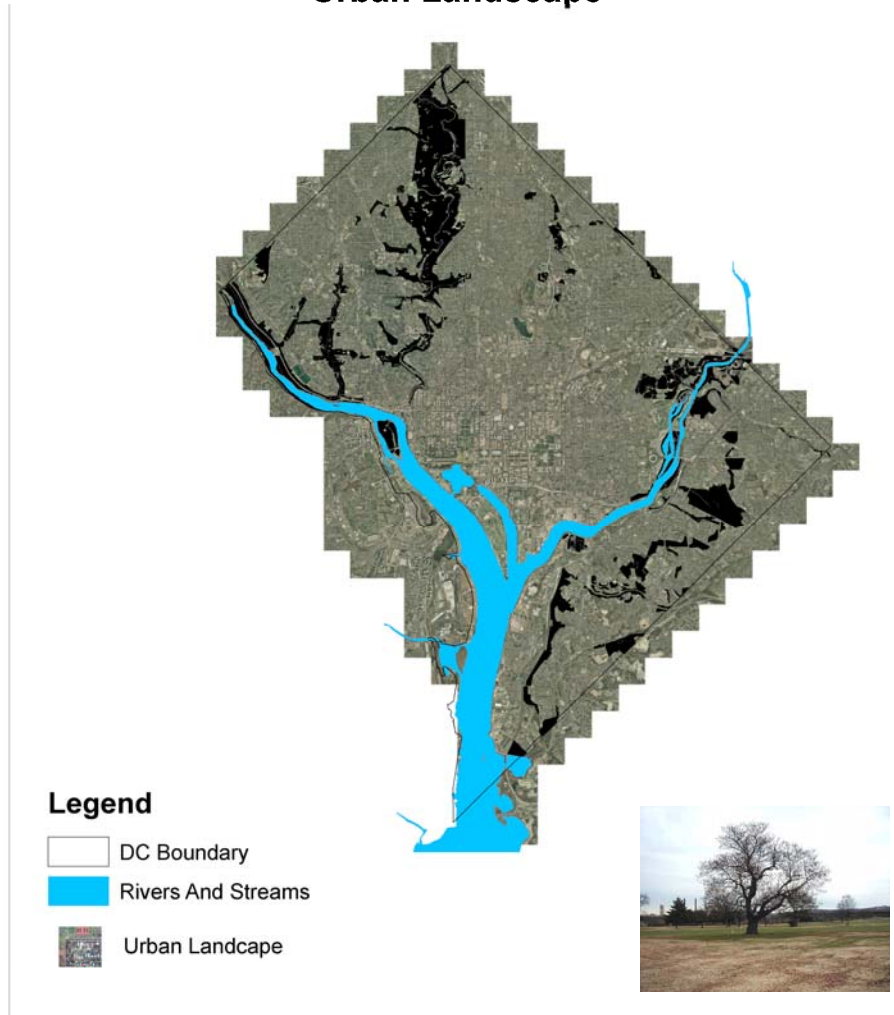


Emergent tidal wetlands are newly formed wetlands that are inundated by tidal waters. They can be seasonally, temporarily, and semi-permanently flooded. Emergent vegetation is important for water quality because it acts as a filter for sediment and other substances. Common plant species include Wild Rice, Duck Potato, American Lotus, *Polygonum* spp., Soft rush, Pickerelweed, Sedges, Bulrush, Nuphar, Common Boneset, Spikerush, Wool-grass, Spatterdock, Swamp Milkweed, and Stiff March Bedstraw.

DISTRICT OF COLUMBIA

CWCS Habitat Map #8

Urban Landscape

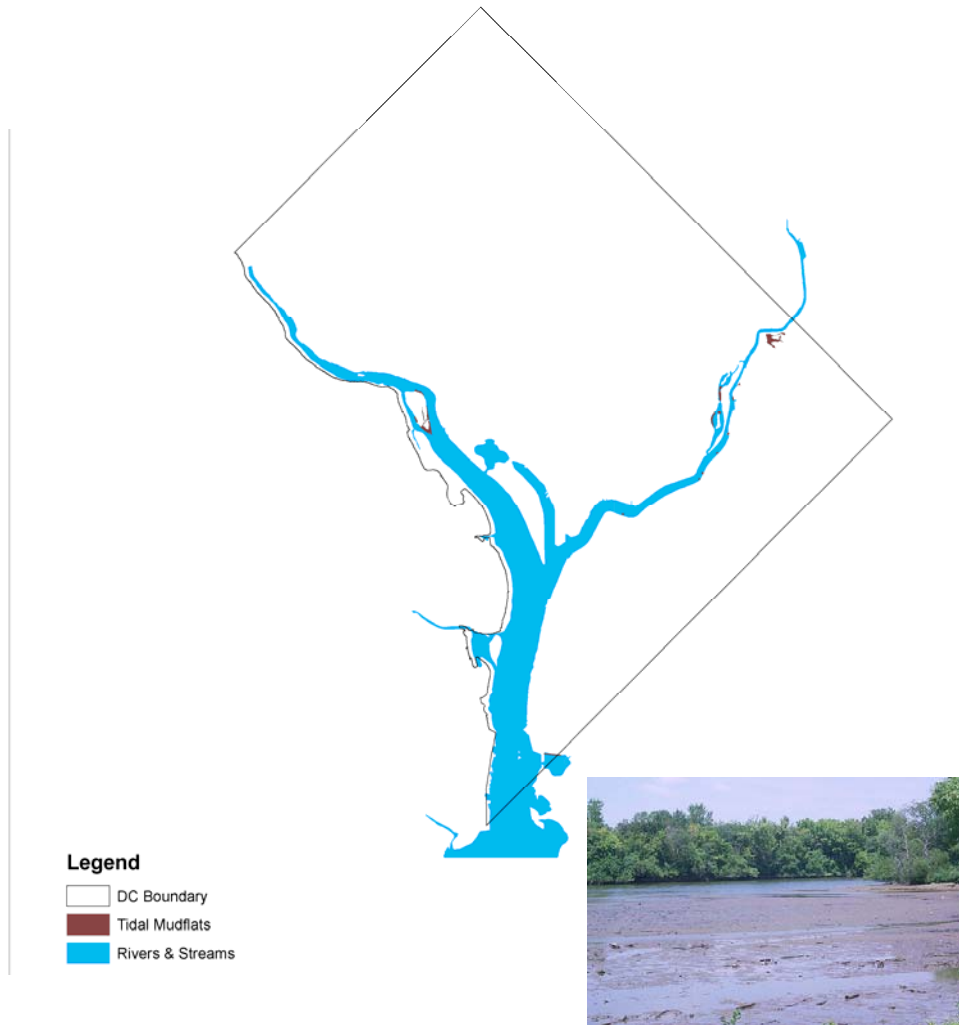


Urban landscapes include both built and natural areas that are managed for human use. Usually these areas are mowed, trimmed, experience a great deal of foot traffic, and are exposed to wind because they are cleared. Because the District has an extremely urbanized setting, the natural areas within the urban landscapes could provide important wildlife habitat and migratory corridors. While there is little scientific information regarding the species of greatest conservation need that use these areas, urban landscapes represent a large portion of the District's land use and has a high potential for providing habitat and management opportunities.

DISTRICT OF COLUMBIA

CWCS Habitat Map #9

Tidal Mudflats

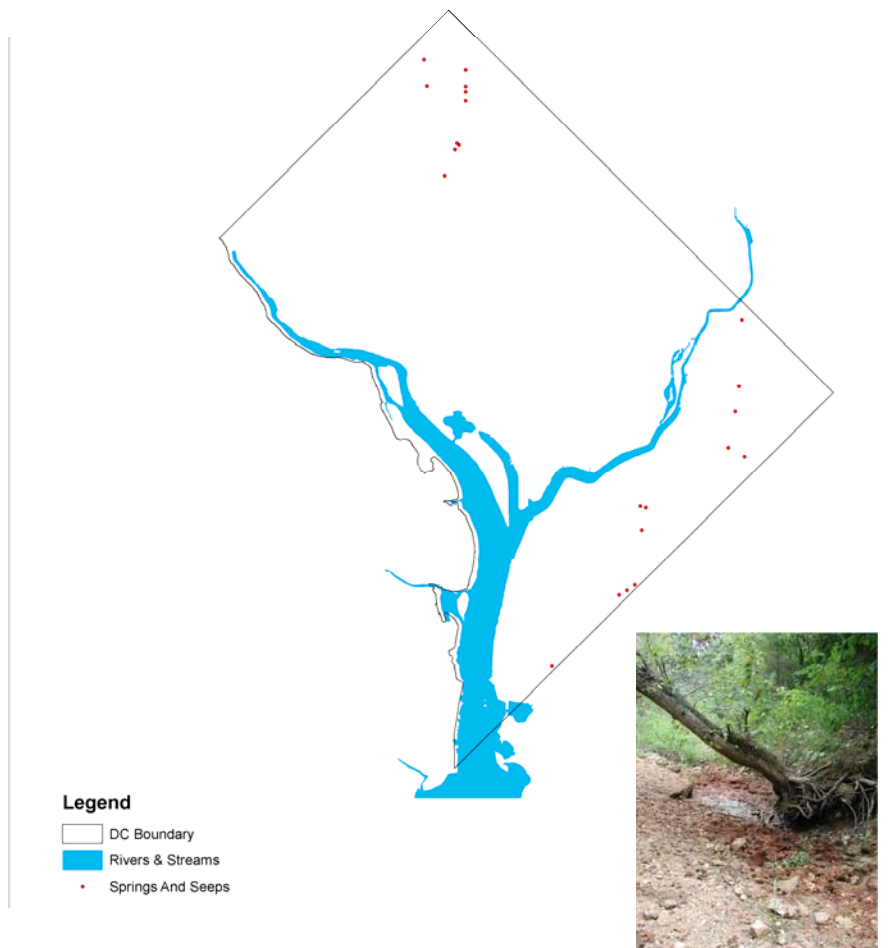


Tidal mudflats are wetlands that occur between vegetated marsh and the water's edge and are alternately exposed and submerged by the tide. They are important for wildlife because they provide habitat and improve habitat quality by purifying the water. Many invertebrates live in the mud and provide food for birds and mammals when the tides are out. Tidal mudflats occur where wave energy is low and herbaceous vegetation covers less than 10% of the mud.

DISTRICT OF COLUMBIA

CWCS Habitat Map #10

Springs And Seeps

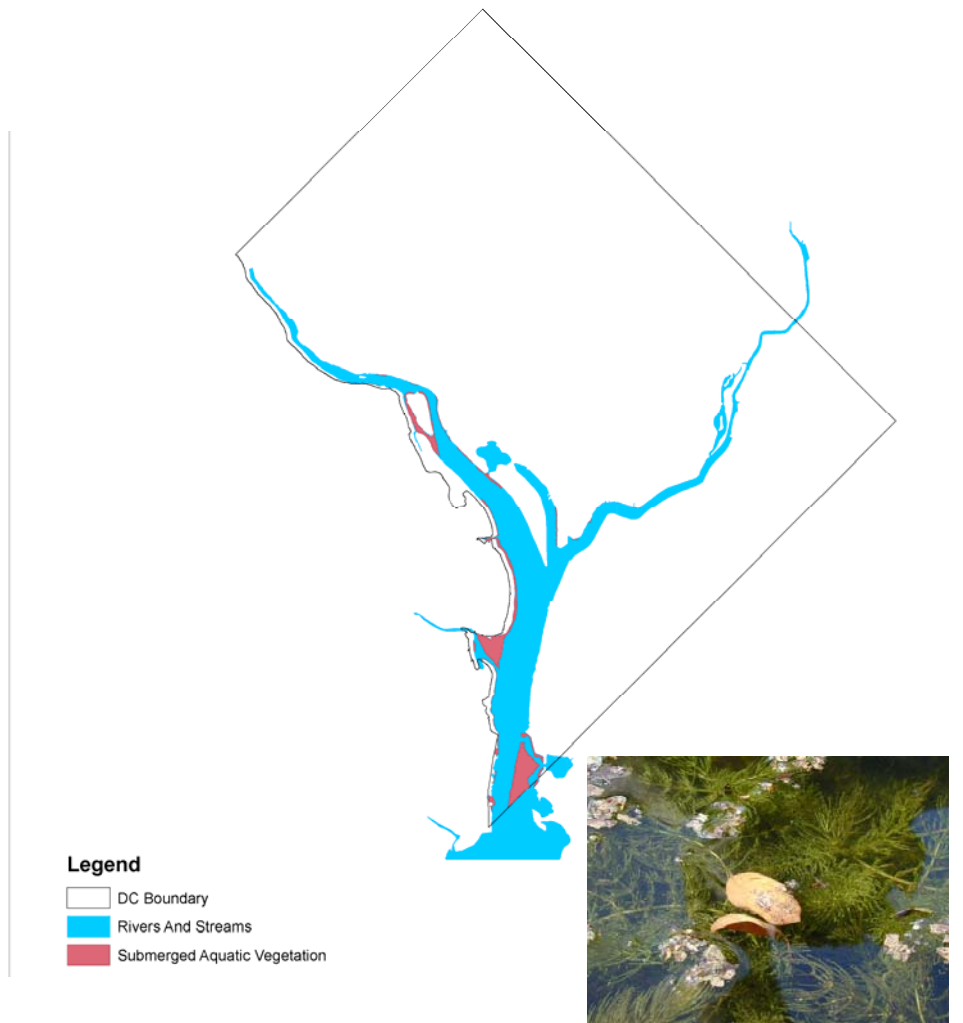


Springs occur when the water table is higher than the ground surface and pressure forces the water out of the land. Springs serve as a water source for almost every kind of wildlife species. Seeps are areas where groundwater continuously surfaces and flows down a slope. Seeps support habitats made up of tiny mosses, lichens, ferns and flowering plants that cling to the surface of the slope. Springs and seeps are required by several of the District's species of greatest conservation need, particularly rare subterranean amphipods and copepods. For example, it is the only habitat for the federally endangered Hay's Spring Amphipod, which is endemic to Rock Creek National Park.

DISTRICT OF COLUMBIA

CWCS Habitat Map #11

Submerged Aquatic Vegetation

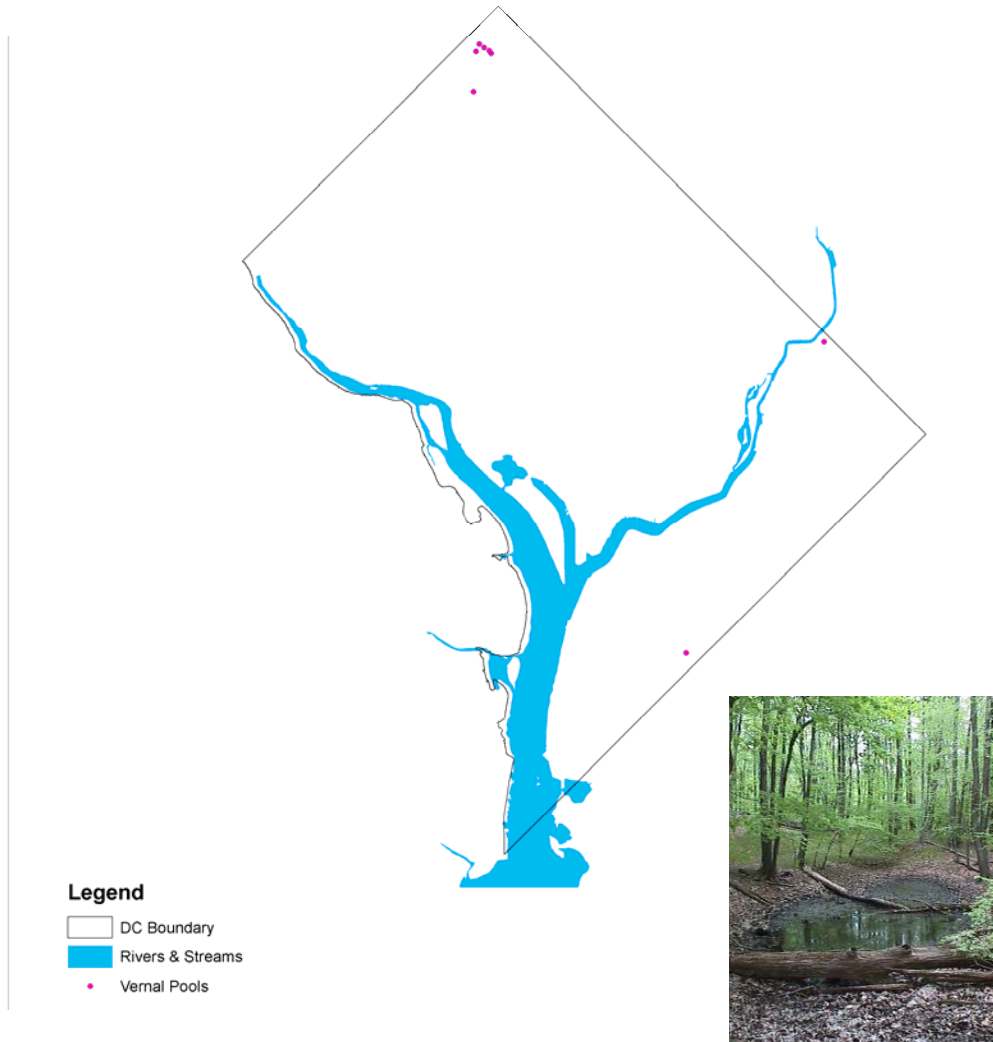


The term Submerged aquatic vegetation (SAV) refers to certain grasses and macroalgae that live completely underwater. SAV provides food and habitat for many aquatic species, as well as helps to prevent erosion and sedimentation. Many species depend upon SAV for foraging or spending their juvenile life stages. SAV is decreasing throughout the District's waterways, which has a negative impact on both aquatic habitats and species of greatest conservation need.

DISTRICT OF COLUMBIA

CWCS Habitat Map #12

Vernal Pools

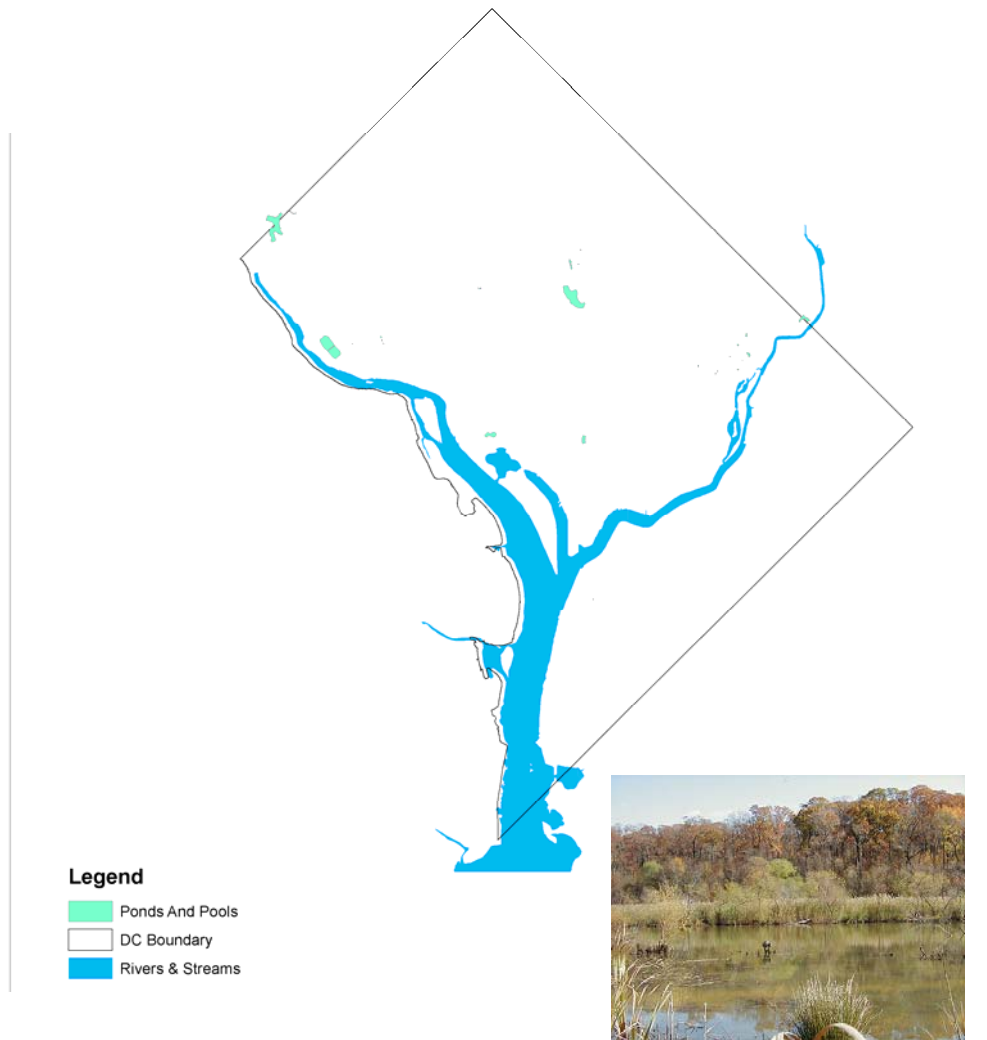


Vernal pools are seasonal bodies of water that flood each year for a few months during the spring and dry up by the end of summer. Because they are not permanently flooded, they do not support fish populations. Instead, they provide important breeding habitat for many species of amphibians. Some species, such as the spotted salamander and wood frog, are obligate vernal pool species, meaning that they require vernal pools to breed.

DISTRICT OF COLUMBIA

CWCS Habitat Map #13

Ponds And Pools



Ponds and pools are located in various areas around the District. Because the District is highly urbanized, ponds and pools have a high potential for providing habitat to many aquatic species of greatest conservation need within urbanized areas. However, scientific data that documenting usage by those species is lacking. Therefore, more research is needed to identify which species use this habitat and to develop the most effective conservation actions for those species.

[Return](#)